YANMAR

Solutioneering Together

Marine Diesel Engine

Products Guide

SAILBOAT ENGINES 9-121 MHP

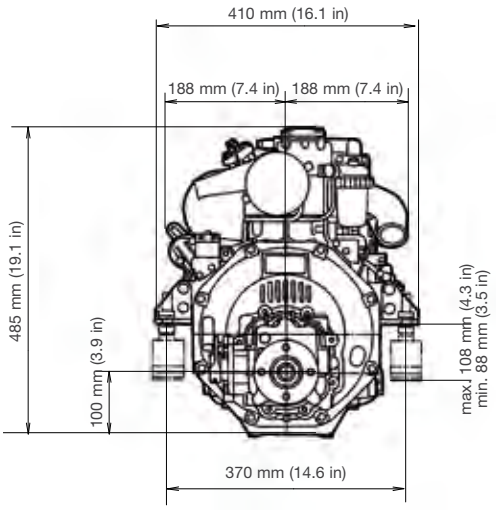
1GM10 Series

Configuration	4-stroke, vertical, raw water-cooled diesel engine		
Maximum output at crankshaft	* 6.7 kW@3600 rpm	[9 mhp@3600 rpm]	
	** 6.6 kW@3600 rpm	[9 mhp@3600 rpm]	
Displacement	0.318 ltr	[19.41 cu in]	
Bore x stroke	75 mm x 72 mm	[2.95 in x 2.83 in]	
Cylinders	1		
Combustion system	Indirect injection [special swirl type pre-combustion chamber]		
Aspiration	Natural aspiration		
Starting system	Electric starting 12V - 1.0 kW with manual combination		
Alternator	12V – 35A		
Start-assist	Glow-plug system		
Cooling system	Direct seawater cooling by rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	71 kg	[157 lbs]	
Environmental	EU: RCD	BSO II	EMC
Engine mounting	Rubber type flexible mounting		

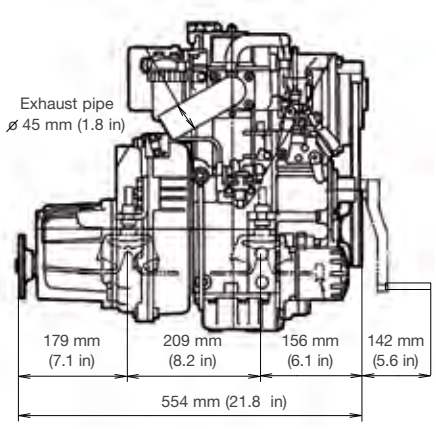
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



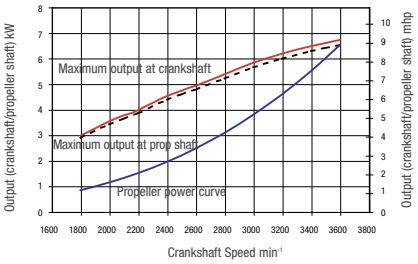
Right side view



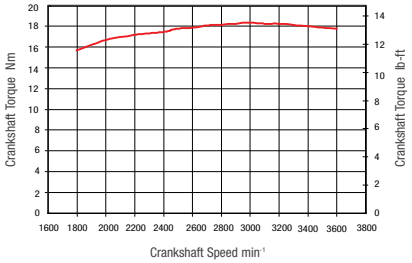
1GM10 with KM2P-1 marine gear

PERFORMANCE CURVES

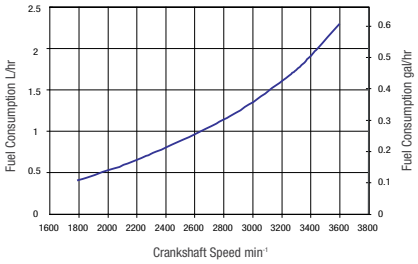
Power



Torque



Fuel Consumption

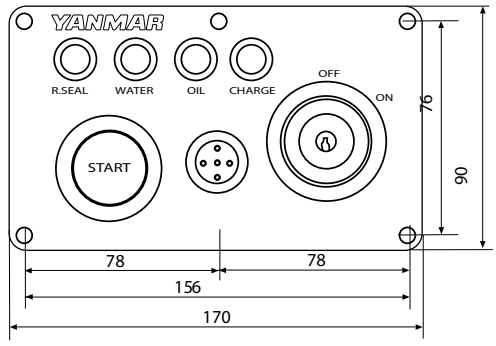


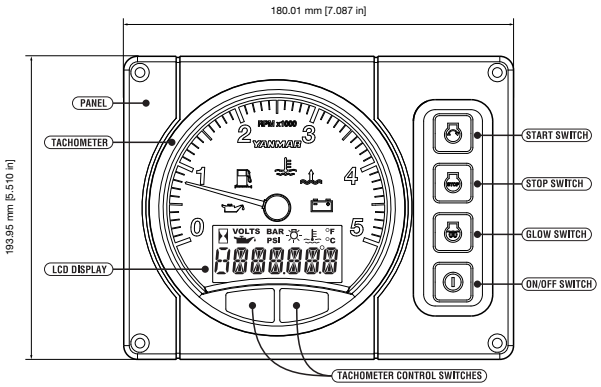
MARINE GEARS/DRIVE

Model	KM2P-1		SAILDRIVE [SD20]
Type	Constant mesh gear with servo-cone clutch		Constant mesh gear with dog clutch
Dry Weight	10 kg [22 lbs]		30 kg [66 lbs]
Reduction Ratio [fwd/asn]	2.21/3.06	2.62/3.06	2.64/2.64
Propeller speed [fwd/asn]	1629/1176	1374/1176	1364/1364
Direction of rotation	Clockwise		Counterclockwise
[propeller shaft - fwd]	viewed from flywheel side		viewed from flywheel side
Dry weight - engine & gear	81 kg [179 lbs]		104 kg [229 lbs]
Length engine and gear/drive	554 mm [22 in]		723 mm [29 in]

INSTRUMENT PANELS

A-type Panel





B20 STANDARD

ACCESORIES

Standard engine package

- Sensor for instrument panel
- Rubber type flexible mounts
- Exhaust mixing elbow [L-type]
- Alternator 35A

Optional accesories

- A-panel
- B-panel
- B20-panel
- Various extension wire harnesses
- Propeller cone nut kit SD20

NOTE: All data subject to change without notice. Text and illustrations are not binding.

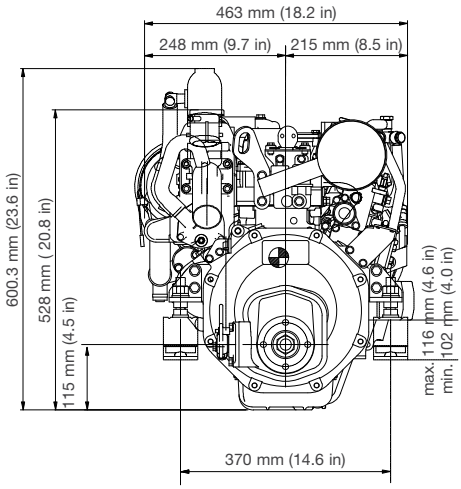
2YM15 Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 10.0 kW@3600 rpm	[13.6 mhp@3600 rpm]	
Displacement	0.570 ltr	[34.7 cu in]	
Bore x stroke	70 mm x 74 mm	[2.75 in x 2.91 in]	
Cylinders	2		
Combustion system	Indirect injection		
Aspiration	Naturel aspiration		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling with heat exchanger		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	103 kg	[227 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier3		
Engine mounting	Rubber type flexible mounting		

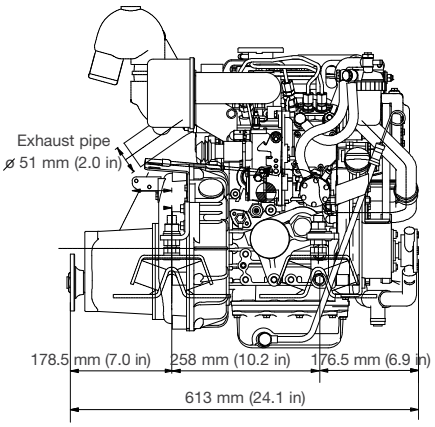
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view

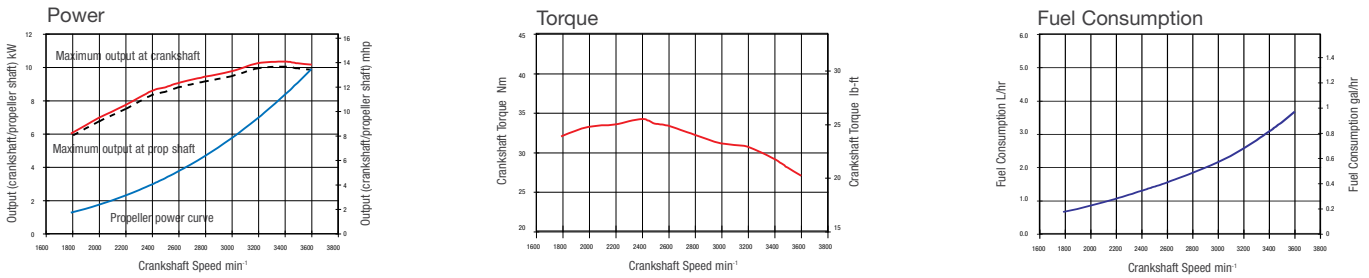


Right side view



2YM15 with KM2P-1 marine gear

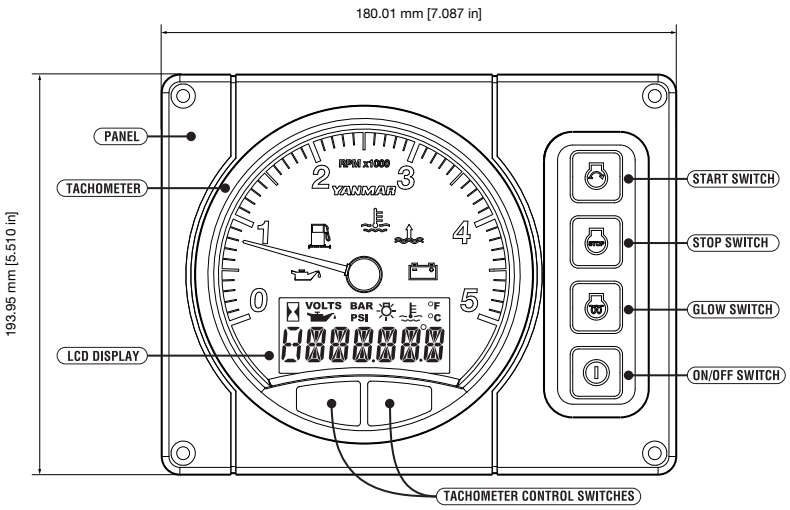
PERFORMANCE CURVES



MARINE GEARS / DRIVE

Model	KM2P-1			Saildrive [SD20]
Type	Constant mesh gear with servo-cone clutch			Constant mesh gear with dog clutch
Dry weight	10 kg [22 lbs]			30 kg [66 lbs]
Reduction ratio [fwd/asn]	2.21/3.06	2.62/3.06	3.22/3.06	2.64/2.64
Propeller speed [fwd/asn]	1629/1176	1374/1176	1118/1176	1363/1363
Direction of rotation	Clockwise			Counterclockwise
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side
Dry weight engine and gear/drive	113 kg [249 lbs]			134 kg [295 lbs]
Length engine and gear/drive	613 mm [24 in]			793 mm [31 in]

INSTRUMENT PANELS



B20 STANDARD

ACCESORIES

Standard engine package

- Set of flexible mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Expansion tank for fresh water cooling system
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional accesories

- Extension wire harness [4m, 6m, 10m]
- High-riser mixing elbow [instead of L-elbow]
- Hot water kit with cocks
- Second station harness
- Propeller cone nut kit SD20

NOTE: All data subject to change without notice. Text and illustrations are not binding.

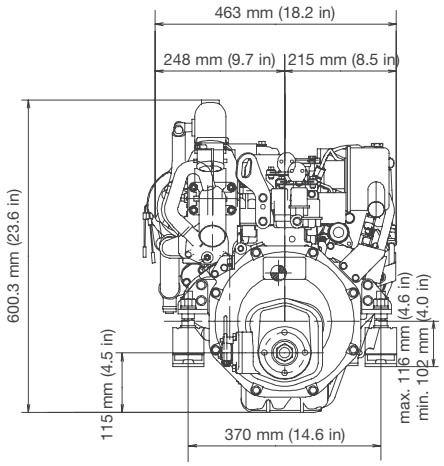
3YM20 Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 15.3 kW@3600 rpm	[21 mhp@3600 rpm]	
Displacement	0.854 ltr	[52.1 cu in]	
Bore x stroke	70 mm x 74 mm	[2.8 in x 2.9 in]	
Cylinders	3		
Combustion system	Indirect injection		
Aspiration	Naturel aspiration		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling with heat exchanger		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	120 kg	[265 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier3		
Engine mounting	Rubber type flexible mounting		

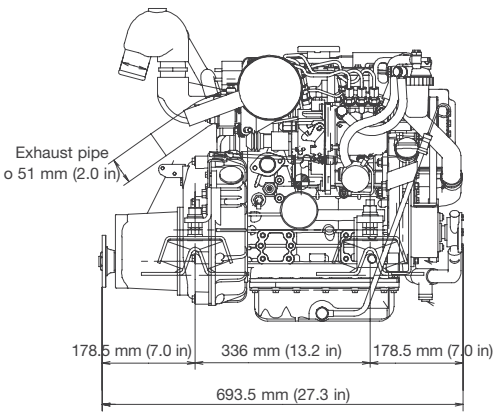
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665:2006]
Technical data is according to ISO 8665:2006/3046-1

DIMENSIONS

Rear view



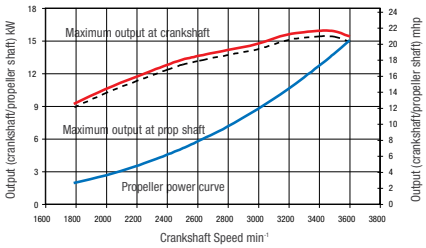
Right side view



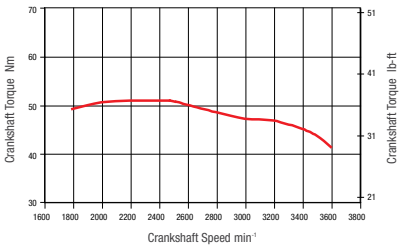
3YM20 with KM2P-1 marine gear

PERFORMANCE CURVES

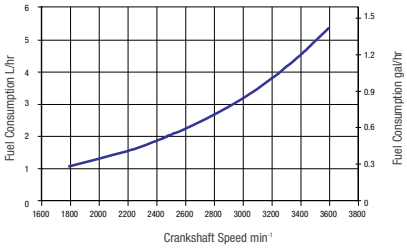
Power



Torque



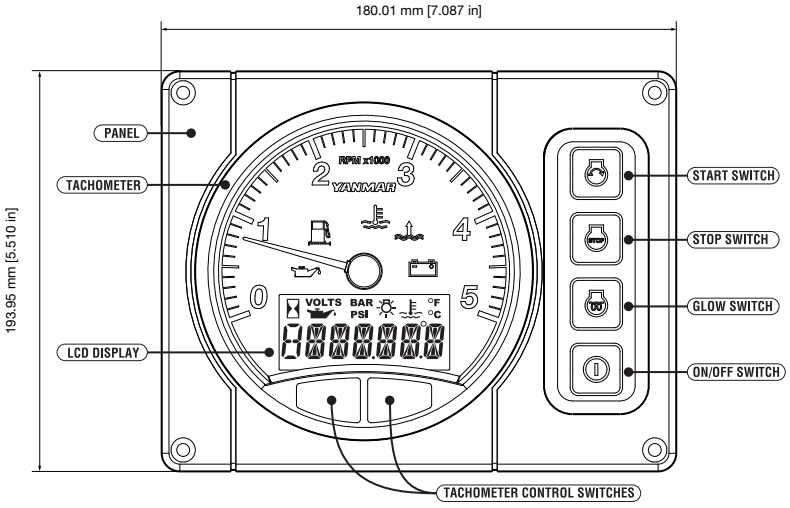
Fuel Consumption



MARINE GEARS / DRIVE

Model	KM2P-1			Saildrive [SD20]
Type	Constant mesh gear with servo-cone clutch			Constant mesh gear with dog clutch
Dry weight	10 kg [22 lbs]			30 kg [66 lbs]
Reduction ratio [fwd/asn]	2.21/3.06	2.62/3.06	3.22/3.06	2.64/2.64
Propeller speed [fwd/asn]	1629/1176	1374/1176	1118/1176	1364/1364
Direction of rotation	Clockwise			Counter clockwise
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side
Dry weight engine and gear/drive	130 kg [287 lbs]			151 kg [333 lbs]
Length engine and gear/drive	693 mm [27 in]			873 mm [34 in]

INSTRUMENT PANELS



B20 STANDARD

ACCESORIES

Standard engine package

- Set of flexible mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Expansion tank for fresh water cooling system
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- Sensor for instrument panel
- B20-panel

Optional accesories

- Extension wire harness [4m, 6m, 10m]
- High-riser mixing elbow [instead of L-elbow]
- Hot water kit with cocks
- Second station harness
- Propeller cone nut kit SD20

NOTE: All data subject to change without notice. Text and illustrations are not binding.

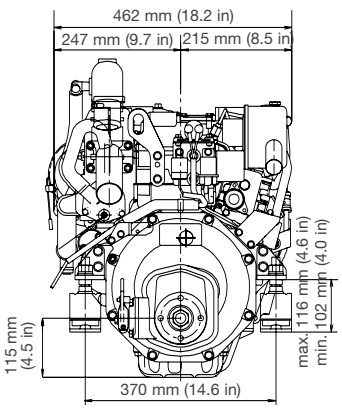
3YM30 Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 21.3 kW@3600 rpm	[29.1 mhp@3600 rpm]	
Displacement	1.115 ltr	[68 cu in]	
Bore x stroke	76 mm x 82 mm	[2.9 in x 3.2 in]	
Cylinders	3		
Combustion system	Indirect injection		
Aspiration	Naturel aspiration		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling with heat exchanger		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	123 kg	[271 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier3		
Engine mounting	Rubber type flexible mounting		

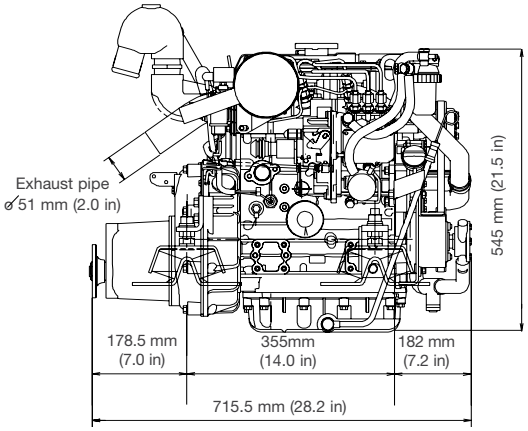
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665:2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



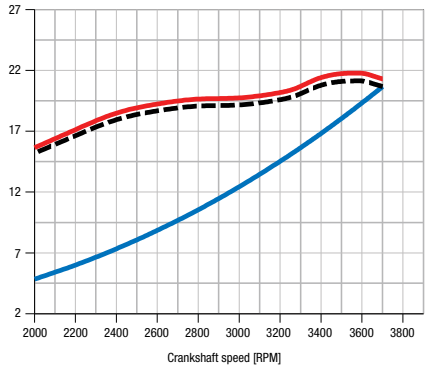
Right side view



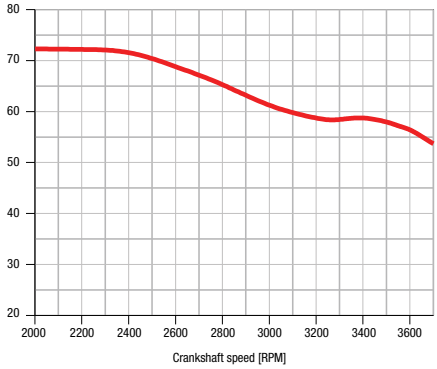
3YM30 with KM2P-1 marine gear

PERFORMANCE CURVES

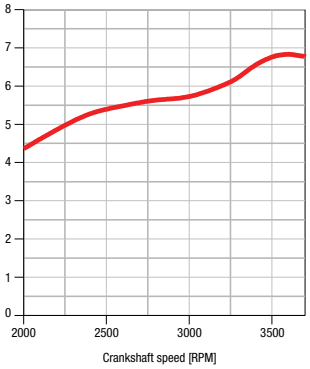
Power [kW]



Torque [Nm]



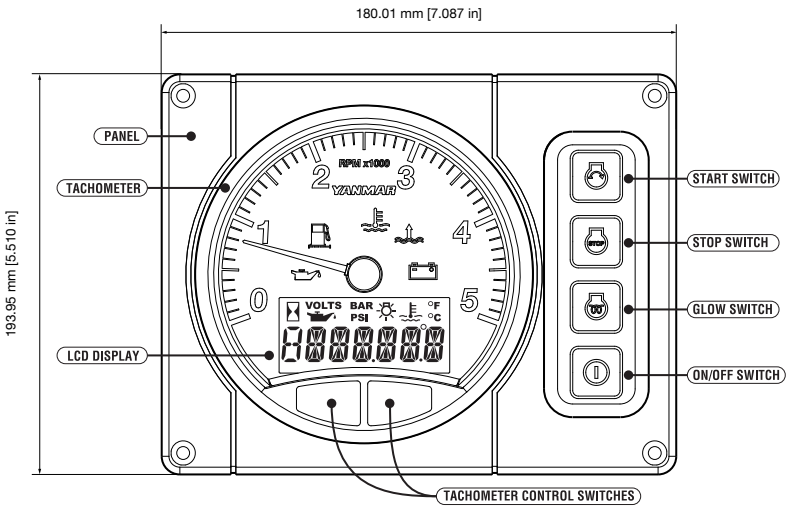
Fuel Consumption [Ltr/hr]



MARINE GEARS / DRIVE

Model	KM2P-1			Saildrive [SD20]
Type	Constant mesh gear with servo-cone clutch			Constant mesh gear with dog clutch
Dry weight	10 kg [22 lbs]			30 kg [66 lbs]
Reduction ratio [fwd/asn]	2.21/3.06	2.62/3.06	3.22/3.06	2.64/2.64
Propeller speed [fwd/asn]	1629/1176	1374/1176	1181/1176	1364/1364
Direction of rotation	Clockwise			Counterclockwise
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side
Dry weight engine and gear/drive	133 kg [293 lbs]			157 kg [346 lbs]
Length engine and gear/drive	715 mm [28 in]			895 mm [35 in]

INSTRUMENT PANELS



B20 STANDARD

ACCESORIES

Standard engine package

- Set of flexible mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Expansion tank for fresh water cooling system
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- Sensor for instrument panel
- B20-panel

Optional accesories:

- Extension wire harness [4m, 6m, 10m]
- High riser mixing elbow [instead of L-elbow]
- Hot water kit with cocks
- Second station harness
- Propeller cone nut kit SD20

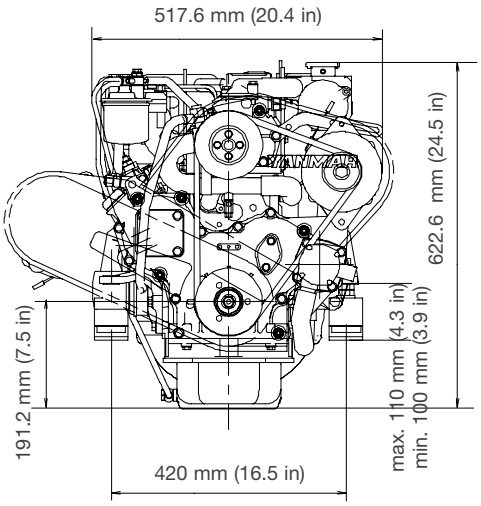
NOTE: All data subject to change without notice. Text and illustrations are not binding.

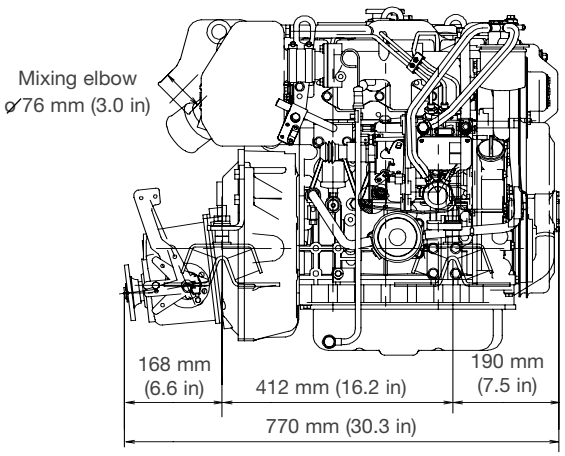
3JH5E Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	28.7 kW@3000 rpm	[38.5 mhp@3000 rpm]	
Displacement	1.642 ltr	[100 cu in]	
Bore x stroke	88 mm x 90 mm	[3.46 in x 3.54 in]	
Cylinders	3 in line		
Combustion system	Direct injection		
Aspiration	Natural aspiration		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	173 kg	[381 lbs]	
Environmental	EU: RCD US: EPA Tier 3	BSO II	EMC
Engine mounting	Rubber type flexible mounting		

NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³: 1 kW = 1.3596 mhp = 1.3410 HP
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

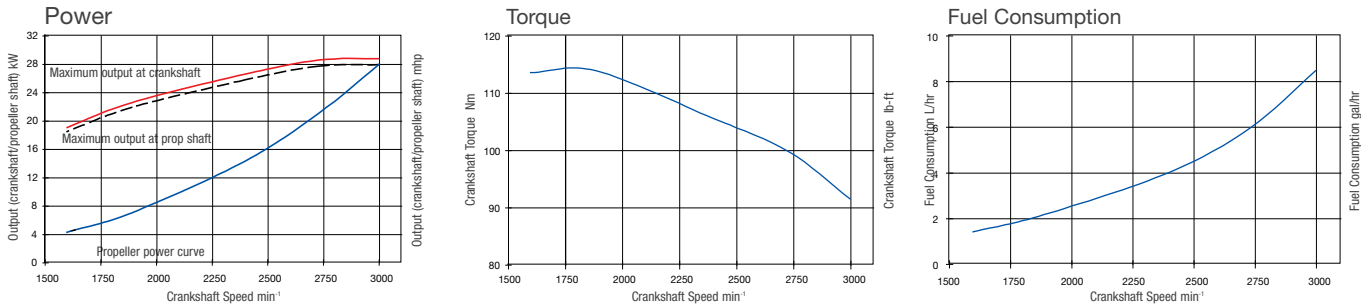
DIMENSIONS





3JH5E with KM35A marine gear

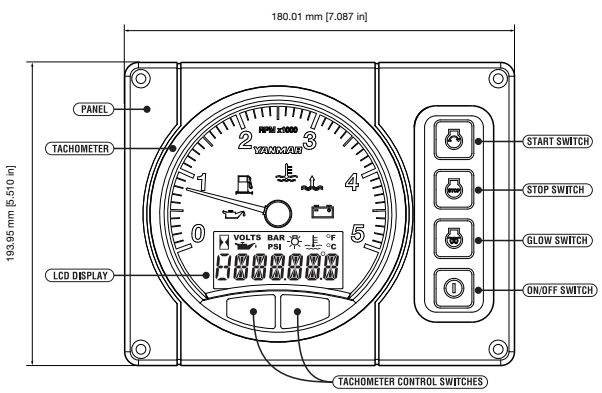
PERFORMANCE CURVES



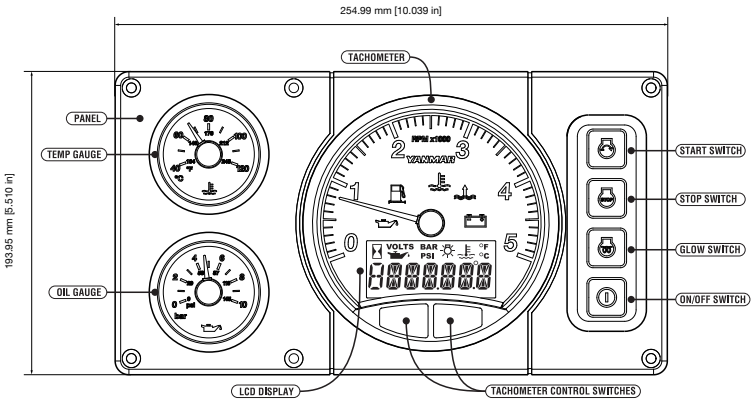
MARINE GEARS/DRIVE

Model	KM35P		KM35A (DOWN ANGLE: 7DEG)		SAILDRIVE (SD60)	
Type	Mechanical cone clutch		Mechanical cone clutch		Mechanical wet type multi-disc	
Dry Weight	12 kg [27 lbs]		13 kg [29 lbs]		40 kg [88 lbs]	
Reduction Ratio [fwd/asn]	2.36/3.16	2.61/3.16	2.33/3.04	2.64/3.04	2.23/2.23	2.49/2.49
Propeller speed [fwd/asn]	1271/949	1149/949	1288/987	1136/987	1345/1345	1205/1205
Direction of rotation [propeller shaft - fwd]	Clockwise viewed from the stern		Clockwise viewed from the stern		Clockwise & Counterclockwise viewed from flywheel side	
Dry weight - engine & gear	185 kg [408 lbs]		186 kg [410 lbs]		213 kg [470 lbs]	
Length engine and gear/drive	777 mm [31 in]		776 mm [31 in]		1019 mm [40 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESORIES

Standard engine package

- Set of flexible engine mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Fresh water expansion tank
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional accesories

- Second alternator 12V - 130A or 24V - 75A incl. smart regulator
- High-riser mixing elbow [instead of L-elbow]
- Hot water kit with cocks
- Second station harness
- C30-panel
- Sensor for C30-panel
- Extension saildrive leg [75 mm]
- Extension wire harness [4m, 6m 10m]
- Propeller cone nut kit SD60

NOTE: All data subject to change without notice. Text and illustrations are not binding.

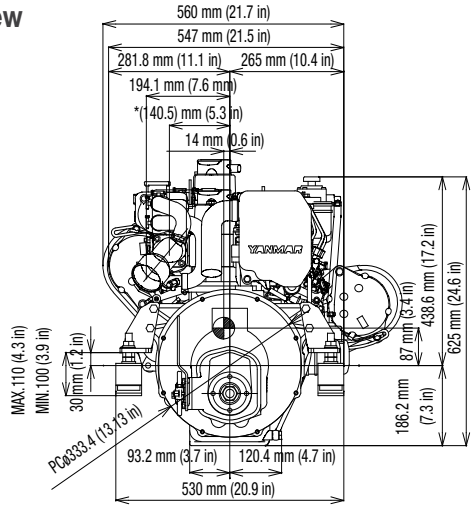
4JH5E Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 39.6 kW@3000 rpm	[53.1 mhp@3000 rpm]	
Displacement	2.19 ltr	[134 cu in]	
Bore x stroke	88 mm x 90 mm	[3.46 in x 3.54 in]	
Cylinders	4 in line		
Combustion system	Direct injection		
Aspiration	Natural aspiration		
Starting system	Electric starting 12V		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal water pump		
	and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	201 kg	[443 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier 3		
Engine mounting	Rubber type flexible mounts		

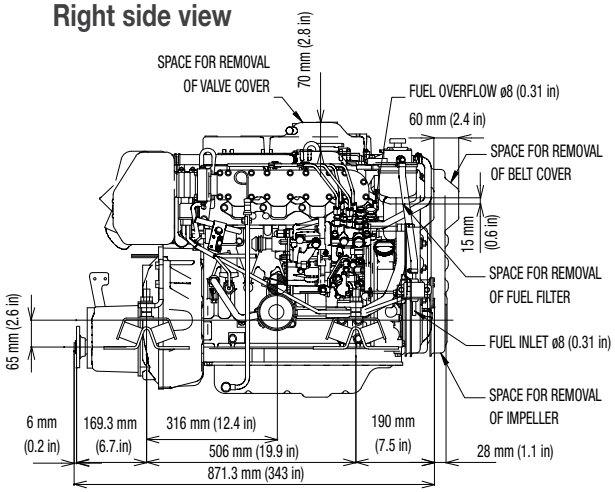
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³: 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



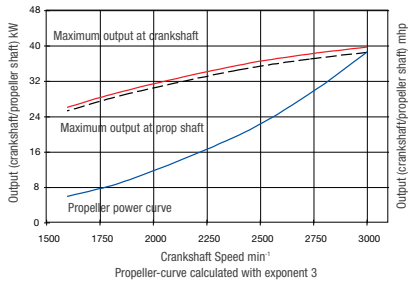
Right side view



4JH5E with KM35P marine gear

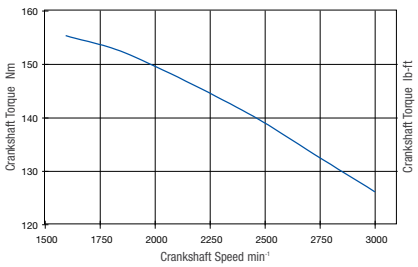
PERFORMANCE CURVES

Power

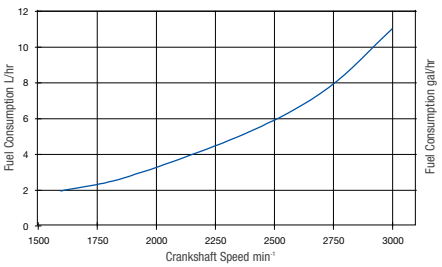


Propeller-curve calculated with exponent 3

Torque



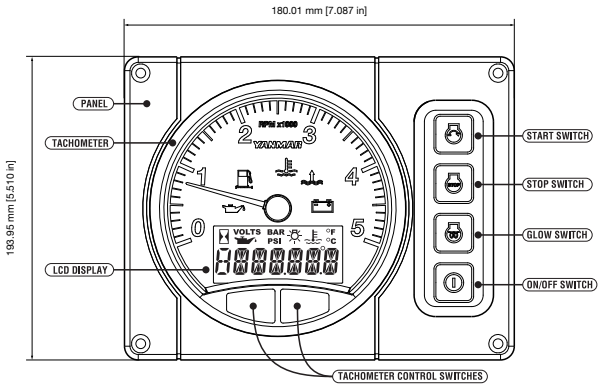
Fuel Consumption



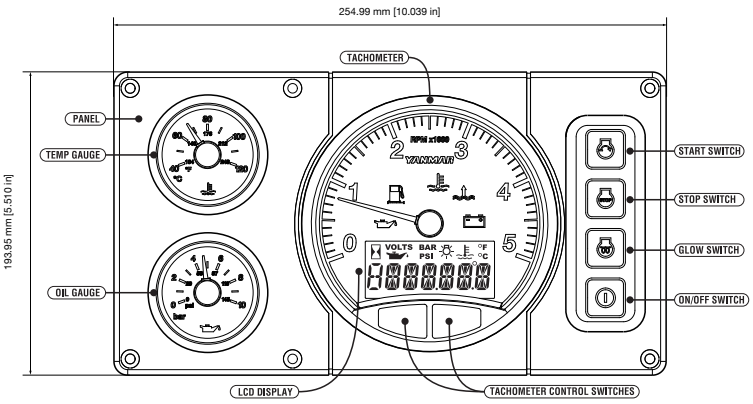
MARINE GEARS/DRIVE

Model	KM35P		KM35A2 [down angle: 7°]		KM4A1 [down angle: 7°]			ZF30M		Saildrive SD60	
Type	Mechanical cone clutch		Mechanical cone clutch		Mechanical cone clutch			Mechanical multi-disc		Mechanical wet type multi-disc	
Dry Weight	12 kg [27 lbs]		13 kg [29 lbs]		29 kg [64 lbs]			28 kg [61 lbs]		40 kg [88 lbs]	
Reduction Ratio [fwd/asn]	2.36/3.16	2.61/3.16	2.33/3.06	2.64/3.06	1.47/1.47	2.14 / 2.14	2.63/2.63	2.15/2.64	2.70/2.64	2.23/2.23	2.49/2.49
Propeller speed [fwd/asn]	1271/949	1149/949	1288/980	1136/980	2041/2041	1402/1402	1141/1141	1395/1136	1111/1136	1345/1345	1205/1205
Direction of rotation [propeller shaft - fwd]	Clockwise viewed from stern		Clockwise viewed from stern		Clockwise viewed from stern			Clockwise viewed from stern		Clockwise & counterclockwise viewed from stern	
Dry weight - engine & gear	213 kg [469.5 lbs]		214 kg [471.7 lbs]		214 kg [471.7 lbs]			229 kg [505 lbs]		241 kg [531 lbs]	
Length engine and gear/drive	871 mm [34 in]		864 mm [34 in]		922 mm [36 in]			950 mm [37 in]		1113 mm [44 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESSORIES

Standard Package

- Set of flexible engine mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Fresh water expansion tank
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional

- Second alternator 12V - 80A, 12V - 130A or 24V - 75A, including smart regulator
- High-riser mixing elbow [instead of L-elbow]
- Extension wire harness [4m, 6m, 10m]
- Hot water kit with cocks
- Second station harness
- C30-panel
- Sensor for C30-panel
- Extension saildrive leg [75 mm]
- Propeller cone nut kit SD60

NOTE: All data subject to change without notice. Text and illustrations are not binding.

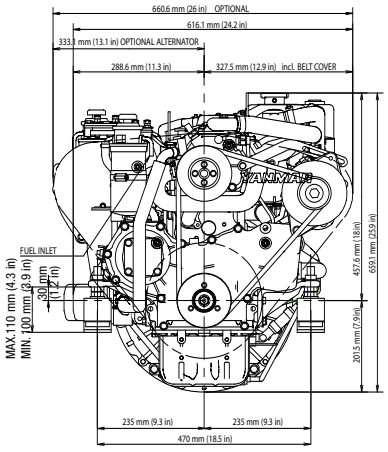
4JH4-TE Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 55.2 kW@3200 rpm	[75 mhp@3200 rpm]	
Displacement	1.995 ltr	[121.7 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	4, 4-valves per cylinder		
Combustion system	Direct injection		
Aspiration	Turbocharged		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal water pump		
	and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	207 kg	[456 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier 3		
Engine mounting	Rubber type flexible mounts		

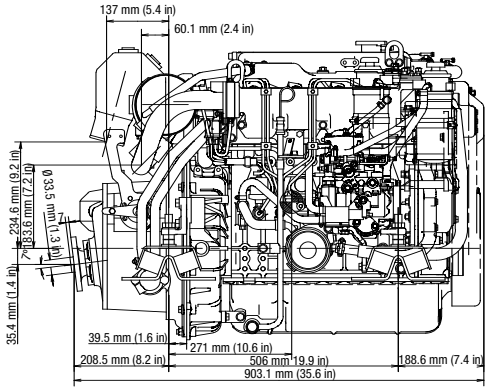
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm^3; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40° C at the inlet of the fuel injection pump [ISO 8665]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view


660.6 mm (26 in) OPTIONAL
616.1 mm (24.2 in)
333.3 mm (13.1 in) OPTIONAL ALTERNATOR
288.6 mm (11.3 in)
327.5 mm (12.9 in) incl. BELT COVER
FUEL INLET
MAX.110 mm (4.3 in)
MIN. 100 mm (3.9 in)
30 mm (1.2 in)
457.6 mm (18 in)
691 mm (25.9 in)
201.5 mm (7.9 in)
235 mm (9.3 in)
235 mm (9.3 in)
470 mm (18.5 in)

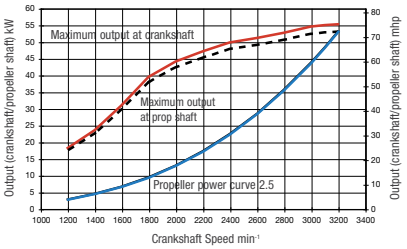
Right side view



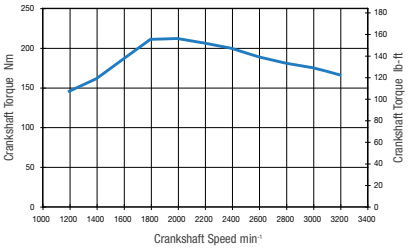
4JH4-TE with KM4A2 marine gear

PERFORMANCE CURVES

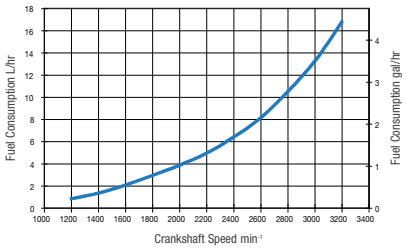
Power


Maximum output at crankshaft
Maximum output at prop shaft
Propeller power curve 2.5
Output (crankshaft/propeller shaft) kW
Output (crankshaft/propeller shaft) mhp
Crankshaft Speed min-1

Torque



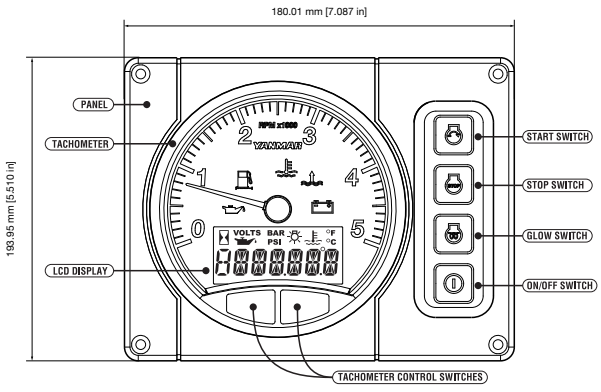
Fuel Consumption



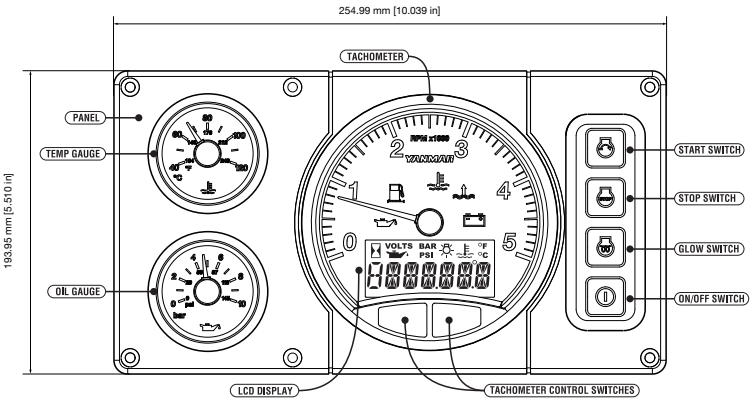
MARINE GEARS/DRIVE

Model	ZF30M parallel		KM4A2 [down angle: 7°]			KMH4A [down angle: 8°]		ZF25A [down angle: 8°]		Saildrive SD60	
Type	Mechanical multi-disc		Mechanical wet cone clutch			Hydraulic, wet multi-disc		Hydraulic, wet multi-disc		Mechanical wet type multi-disc	
Dry Weight	28 kg [61 lbs]		30 kg [66 lbs]			31 kg [68 lbs]		30 kg [66 lbs]		42 kg [92 lbs]	
Reduction Ratio [fwd/asn]	2.15/2.64	2.70/2.64	1.47/1.47	2.14 / 2.14	2.63/2.63	2.04/2.04	2.45/2.45	1.93/1.93	2.48/2.48	2.23/2.23	2.49/2.49
Propeller speed at cont. rating [fwd/asn]	1488/1212	1185/1212	2177/2177	1495/1495	1217/1217	1569/1569	1306/1306	1658/1658	1290/1290	1435/1435	1285/1285
Direction of rotation [propeller shaft - fwd]	Clockwise viewed from flywheel side		Clockwise & Counterclockwise viewed from flywheel side			Clockwise & Counterclockwise viewed from flywheel side		Clockwise & Counterclockwise viewed from flywheel side		Clockwise & Counterclockwise viewed from flywheel side	
Dry weight - engine & gear	235 kg [518 lbs]		237 kg [522 lbs]			238 kg [524 lbs]		237 kg [522 lbs]		249 kg [549 lbs]	
Length engine and gear/drive	923 mm [36 in]		903 mm [35 in]			933 mm [37 in]		1017 mm [40 in]		1148 mm [45 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESSORIES

Standard Package

- Set of flexible mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Expansion tank for fresh water cooling system
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional

- Digital B or C type instrument panel
- Second Alternator 12V - 130A or 24V - 75A, including smart regulator
- High-riser mixing elbow [instead of L-elbow]
- Extension wire harness [4m, 6m, 10m]
- Hot water kit with cocks
- Second station harness
- C30-panel
- Sensor for C30-panel
- Extension saildrive leg [75mm]
- Propeller cone nut kit SD60

NOTE: All data subject to change without notice. Text and illustrations are not binding.

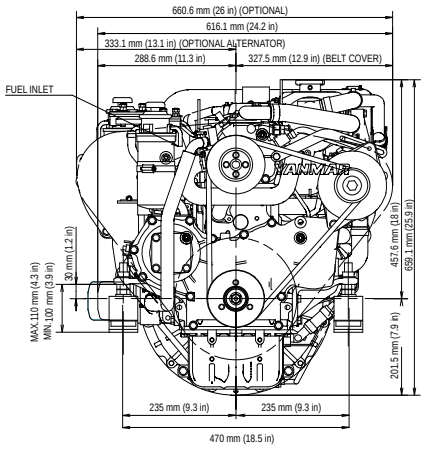
4JH4-HTE Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 80.9 kW@3200 rpm	[110 mhp@3200 rpm]	
Displacement	1.995 ltr	[121.7 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	4, 4-valves per cylinder		
Combustion system	Direct injection		
Aspiration	Turbocharged		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal water pump		
	and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	217 kg	[478 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier 2		
Engine mounting	Rubber type flexible mounts		

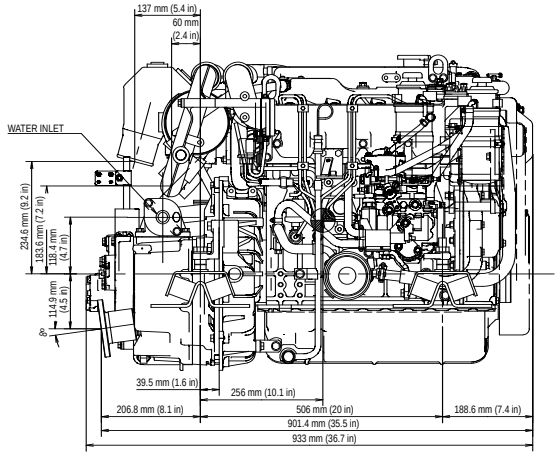
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm^3; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view


660.6 mm (26 in) (OPTIONAL)
616.1 mm (24.2 in)
333.1 mm (13.1 in) (OPTIONAL ALTERNATOR)
288.6 mm (11.3 in)
327.5 mm (12.9 in) (BELT COVER)
FUEL INLET
YANMAR
457.6 mm (18 in)
659.1 mm (25.9 in)
30 mm (1.2 in)
MAX-110 mm (4.3 in)
MIN-100 mm (3.9 in)
201.5 mm (7.9 in)
235 mm (9.3 in)
235 mm (9.3 in)
470 mm (18.5 in)

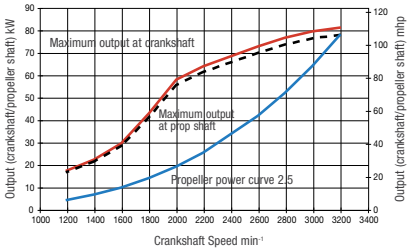
Right side view



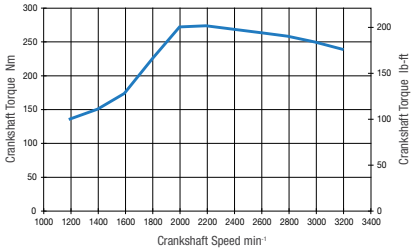
4JH4-HTE with KMH4A marine gear

PERFORMANCE CURVES

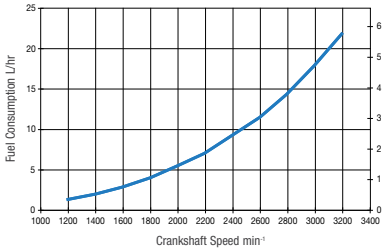
Power


Output (crankshaft/propeller shaft) kW
Output (crankshaft/propeller shaft) mhp
Maximum output at crankshaft
Maximum output at prop shaft
Propeller power curve 2.5
Crankshaft Speed min-1

Torque



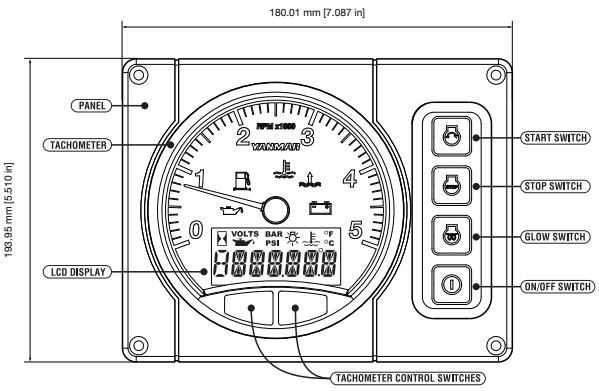
Fuel Consumption



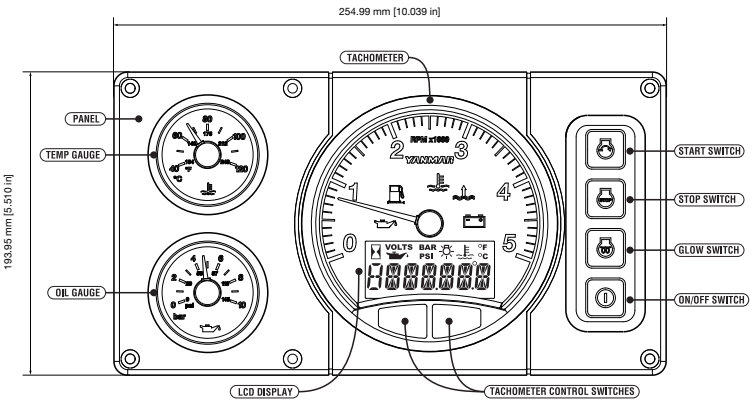
MARINE GEARS/DRIVE

Model	ZF30M parallel		KM4A2 [down angle: 7º]			KMH4A [down angle: 8º]		ZF25A [down angle: 8º]	
Type	Mechanical multi-disc		Mechanical wet cone clutch			Hydraulic, wet multi-disc		Hydraulic, wet multi-disc	
Dry Weight	28 kg [61 lbs]		30 kg [66 lbs]			31 kg [68 lbs]		30 kg [66 lbs]	
Reduction Ratio [fwd/asn]	2.15/2.64	2.70/2.64	1.47/1.47	2.14/2.14	2.63/2.63	2.04/2.04	2.45/2.45	1.93/1.93	2.48/2.48
Propeller speed at cont. rating [fwd/asn]	1488/1212	1185/1212	2177/2177	1495/1495	1217/1217	1569/1569	1306/1306	1658/1658	1290/1290
Direction of rotation [propeller shaft - fwd]	Clockwise viewed from flywheel side		Clockwise & Counterclockwise viewed from flywheel side			Clockwise & Counterclockwise viewed from flywheel side		Clockwise & Counterclockwise viewed from flywheel side	
Dry weight - engine & gear	245 kg [540 lbs]		247 kg [545 lbs]			248 kg [547 lbs]		247 kg [545 lbs]	
Length engine and gear/drive	923 mm [36 in]		903 mm [35 in]			933 mm [37 in]		1017 mm [40 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESSORIES

Standard Package

- Set of flexible mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Expansion tank for fresh water cooling system
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional

- Second alternator 12V - 130A or 24V - 75A, including smart regulator
- High-riser mixing elbow [insted of L-elbow]
- Extension wire harnesses [4m, 6m 10m]
- Hot water kit with cocks
- Second station harness
- C30-panel
- Sensor for C-30 panel

NOTE: All data subject to change without notice. Text and illustrations are not binding.

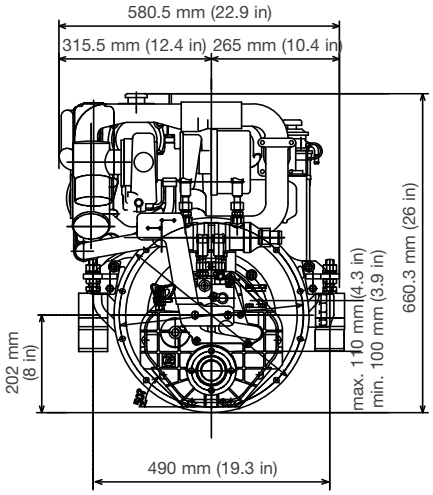
4JH3-DTE Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 89.1 kW@3800 rpm	[121 mhp@3800 rpm]	
	** 91.9 kW@3800 rpm	[125 mhp@3800 rpm]	
Displacement	1.995 ltr	[122 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	4		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from stern		
Dry weight without gear	229 kg	[504.8 lbs]	
Environmental	EU: RCD	BSO II	EMC
Engine mounting	Rubber type flexible mounting		

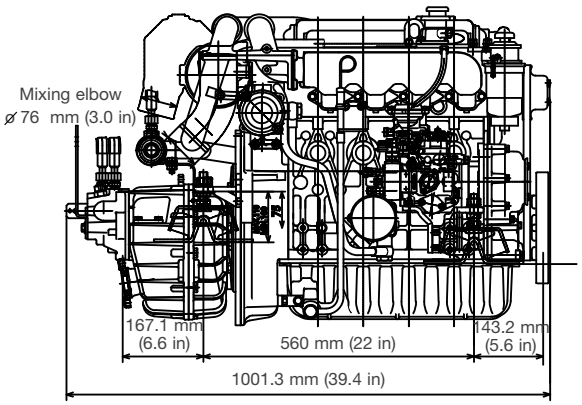
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm^3; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
** Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



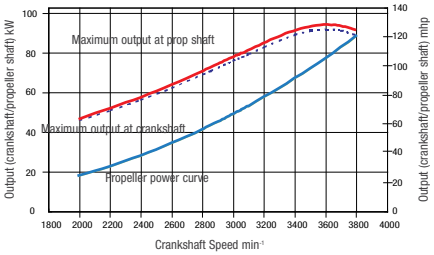
Right side view



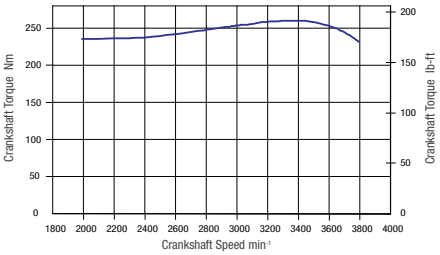
4JH3-DTE with ZF25A marine gear

PERFORMANCE CURVES

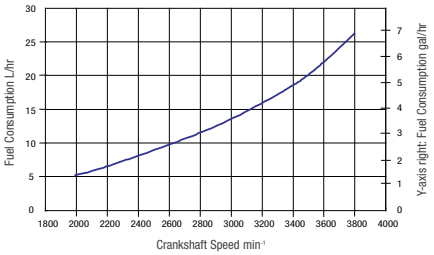
Power



Torque



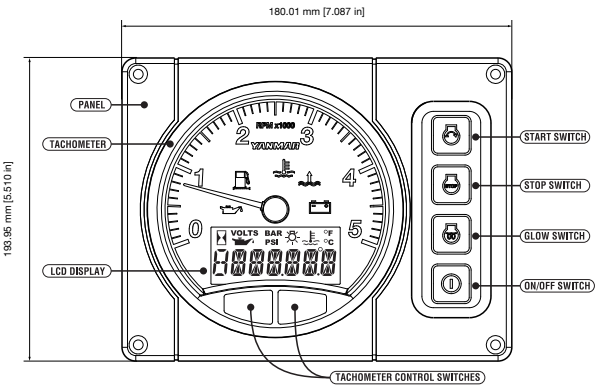
Fuel Consumption



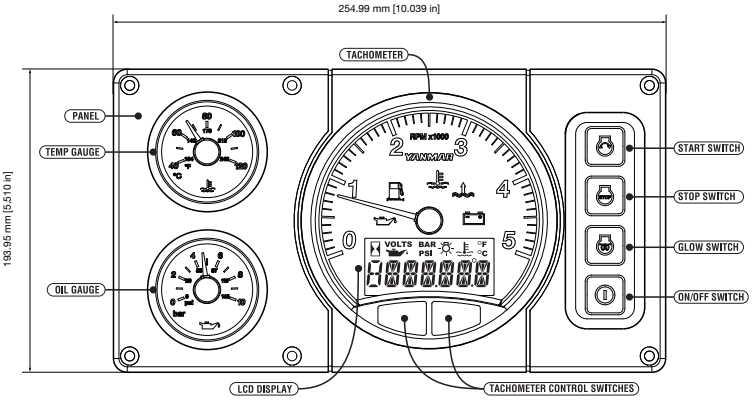
MARINE GEARS/DRIVE

Model	**KMH4A1 [down angle: 8º]**		**ZF25A**	
Type	Hydraulic clutch		Hydraulic clutch	
Dry Weight	31 kg [68 lbs]		30 kg [66 lbs]	
Reduction Ratio [fwd/asn]	2.04/2.04	2.45/2.45	1.93/1.93	2.48/2.48
Propeller speed [fwd/asn]	1814/1814	1507/1507	1917/1917	1492/1492
Direction of rotation	Clockwise & Counterclockwise		Clockwise & Counterclockwise	
[propeller shaft - fwd]	viewed from stern		viewed from stern	
Dry weight - engine & gear	260 kg [573 lbs]		259 kg [571 lbs]	
Length engine and gear/drive	886 mm [35 in]		1001 mm [39 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESSORIES

Standard Package

- Set of flexible mounts
- Exhaust mixing elbow [L-type]
- Expansion tank for fresh water cooling system
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional

- High-riser mixing elbow [instead of L-elbow]
- Extension wire harness [4m, 6m, 10m]
- Hot water fitting with cocks
- Second station harness
- C30-panel
- Sensor for C30-panel

NOTE: All data subject to change without notice. Text and illustrations are not binding.

POWERBOAT ENGINES 150-900 MHP

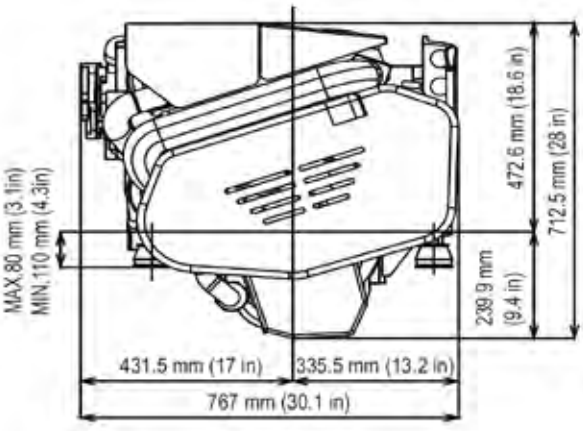
4BY3-150 / 4BY3-180

Configuration	4-stroke, water-cooled diesel engine		
Maximum output at crankshaft	110 kW@4000 rpm	[150 mhp@4000 rpm]	
	132 kW@4000 rpm	[180 mhp@4000 rpm]	
Displacement	1.995 ltr	[122 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	4 in line		
Combustion system	Direct injection with Bosch Common Rail System		
Aspiration	Turbocharger + charge air cooler		
Low Idle rpm	650 - 950 rpm	[adjustable]	
Electric system	12V		
Alternator	12V - 150A		
Start-assist	Glow-plug system		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	Sea water cooling by rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	269 kg	[593 lbs]	
Environmental	EU: RCD	EMC	BSO II
	US: EPA Tier3		
	SOLAS MED 96/98/EC		
Engine mounting	Rubber type flexible mounting		

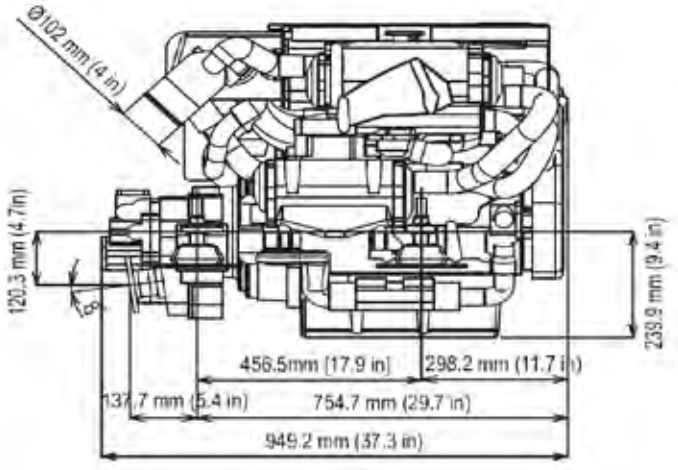
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

FRONT VIEW

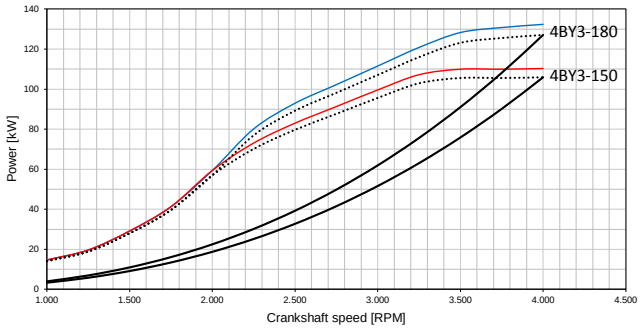


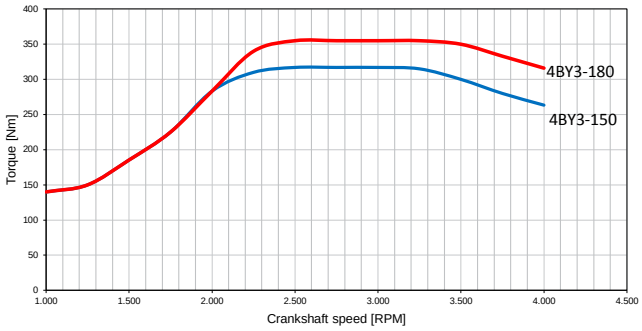
RIGHT SIDE VIEW



4BY3-180 with KMH41A marine gear

PERFORMANCE CURVES

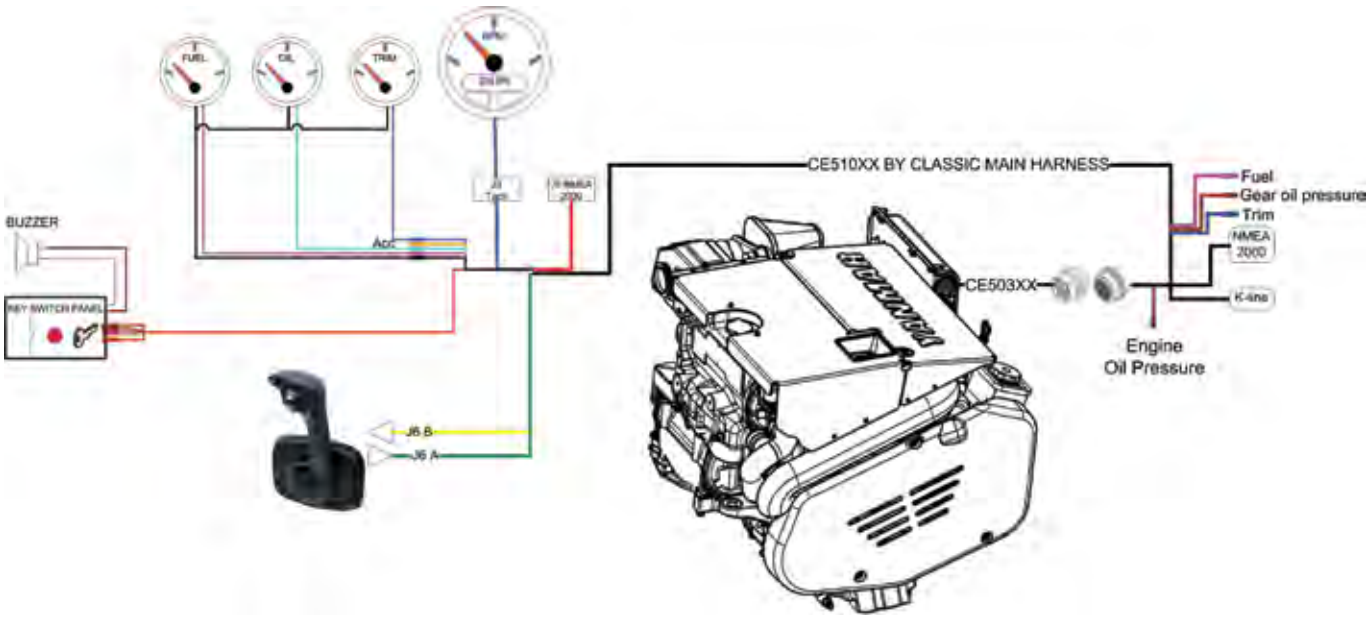




DRIVE SYSTEMS

Model	KMH41A [down angle 8°]			
Type	Hydraulic Actuated Multi-friction disc clutch			
Dry weight	34 kg excl. foot and cooler [=15.5 kg]			
Reduction ratio [fwd/asn]	1.53	2.04	2.45	2.62
Direction of rotation	Clockwise & Counterclockwise viewed from the stern			
Lub oil specifications	API class: CF or higher SAE grade #30			
Dry weight - engine & gear	308 kg			

CONTROL SYSTEM “CLASSIC”



ENGINE ACCESORIES

Standard engine package

- Single pole, 150A Alternator
- Exhaust mixing elbow [L-type]
- Automatic glow-plug controller
- Flexible engine mounting
- Analogue throttle with redundancy function

Optional accesories

- High-riser mixing elbow [instead of L-elbow]
- Exhaust-side 2nd dipstick
- Electric gearshift
- Trolling on gearbox [mechanical and electrical]
- NMEA2000 digital display
- Full NMEA2000 electronic control system [CAN-bus]

NOTE: All data subject to change without notice. Text and illustrations are not binding.

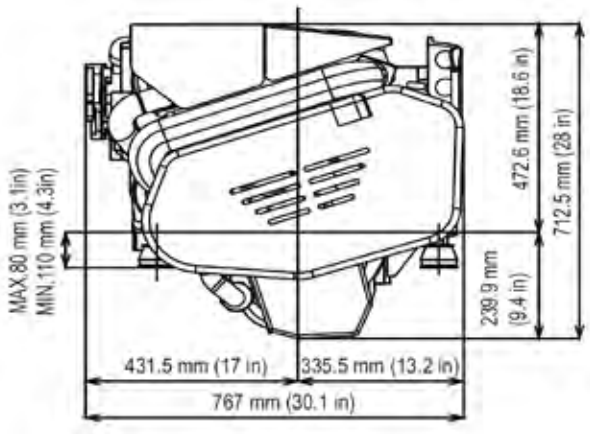
6BY3-220 / 6BY3-260

Configuration	4-stroke, water-cooled diesel engine		
Maximum output at crankshaft	162 kW@4000 rpm	[220 mhp@4000 rpm]	
	191 kW@4000 rpm	[260 mhp@4000 rpm]	
Displacement	2.993 ltr	[183 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	6 in line		
Combustion system	Direct injection with Bosch Common-rail system		
Aspiration	Turbocharger + charge-air cooler		
Low Idle rpm	650 - 950 rpm	[adjustable]	
Electric system	12V		
Alternator	12V - 150A		
Start-assist	Glow-plug system		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	Sea water cooling by rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counter clockwise viewed from flywheel side		
Dry weight without gear	328 kg	[723 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier3		
	IMO: MARPOL 73/78 Annex VI		
	SOLAS MED 96/98/EC		
Engine mounting	Rubber type flexible mounting		

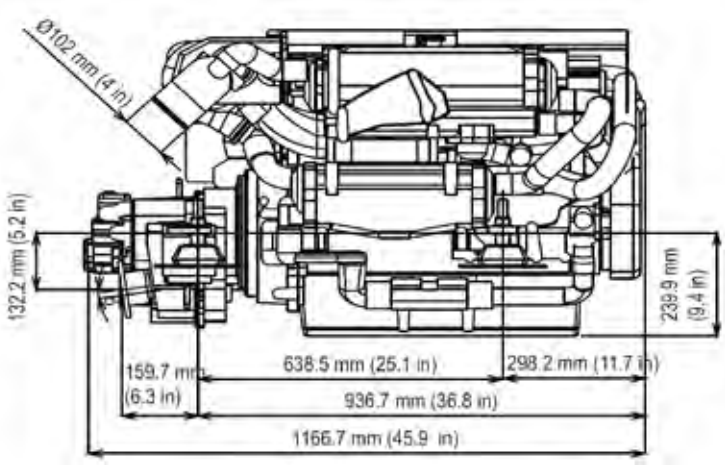
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

FRONT VIEW

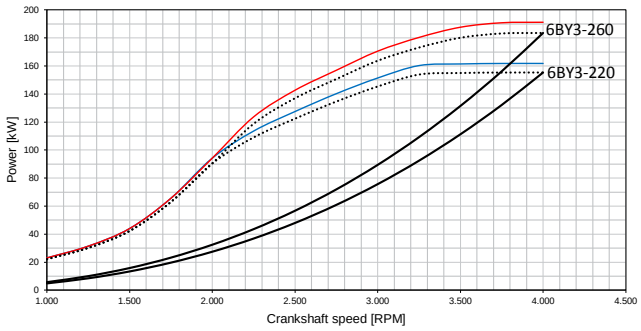


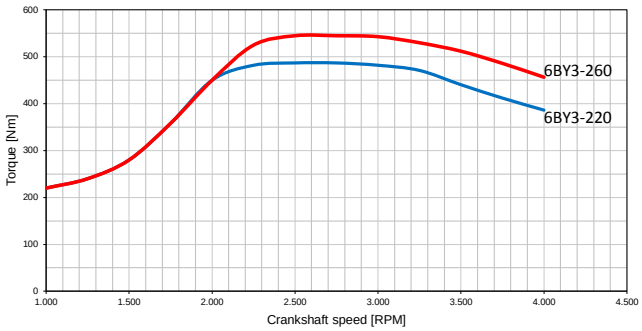
RIGHT SIDE VIEW



6BY3-260 with KMH51A Marine gear

PERFORMANCE CURVES



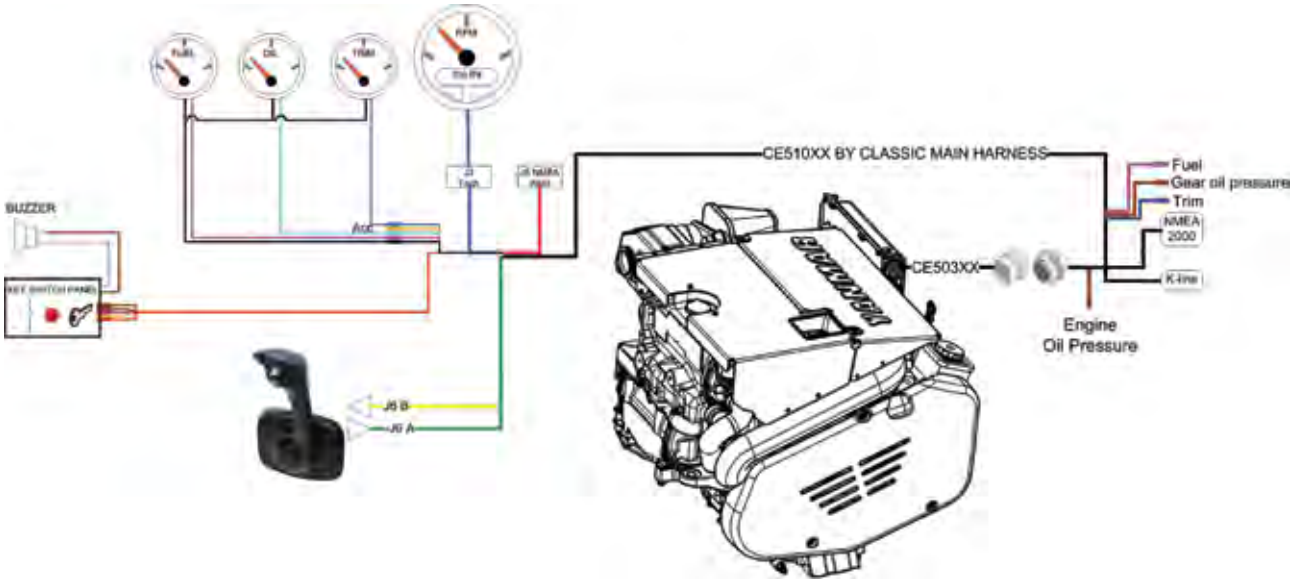


DRIVE SYSTEMS

Model	**KMH50A [down angle 8°]**			
Type	Hydraulic Actuated Multi-friction disc clutch			
Dry weight	43 kg excl. foot and cooler [=15.5 kg]			
Reduction ratio [fwd/asn]	1.67/1.67	2.13/2.13		2.43/2.43
Direction of rotation	Clockwise & Counterclockwise viewed from the stern			
Lub oil specifications	API class: CF or higher SAE grade #30			
Dry weight - engine & gear	375 kg			

Model	**KMH50V [Integral V-drive 12°]**			
Type	Hydraulic Actuated Multi-friction disc clutch			
Dry weight	59 kg excl. foot and cooler [=20 kg]			
Reduction ratio [fwd/asn]	1.22/1.22	1.58/1.58	2.08/2.08	2.47/2.47
Direction of rotation	Clockwise & Counterclockwise viewed from the stern			
Lub oil specifications	API class: CF or higher SAE grade #30			
Dry weight - engine & gear	395 kg			

CONTROL SYSTEM “CLASSIC”



ENGINE ACCESORIES

Standard engine package

- Single pole, 150A Alternator
- Exhaust mixing elbow [L-type]
- Automatic glow-plug controller
- Flexible engine mounting
- Analogue throttle with redundancy function

Optional accesories

- High-riser mixing elbow [instead of L-elbow]
- Exhaust-side 2nd dipstick
- Electric gearshift
- Trolling on gearbox [mechanical and electrical]
- NMEA2000 digital display
- Full NMEA2000 electronic control system [CAN-bus]

NOTE: All data subject to change without notice. Text and illustrations are not binding.

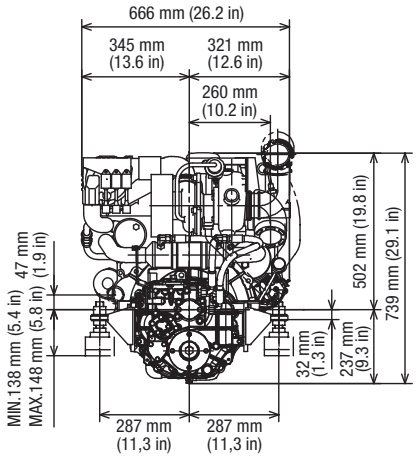
6LPA-STP2 Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 232 kW@3800 rpm	[315 mhp@3800 rpm]	
	** 225 kW@3800 rpm	[306 mhp@3800 rpm]	
Displacement	4.164 ltr	[254 cu in]	
Bore x stroke	94 mm x 100 mm	[3.7 in x 3.94 in]	
Cylinders	6 in line, 4-valves per cylinder		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electric starting 12V - 2.5 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	408 kg	[899 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier2		
	IMO: MARPOL 73/78 Annex VI		
Engine mounting	Rubber type flexible mounting		

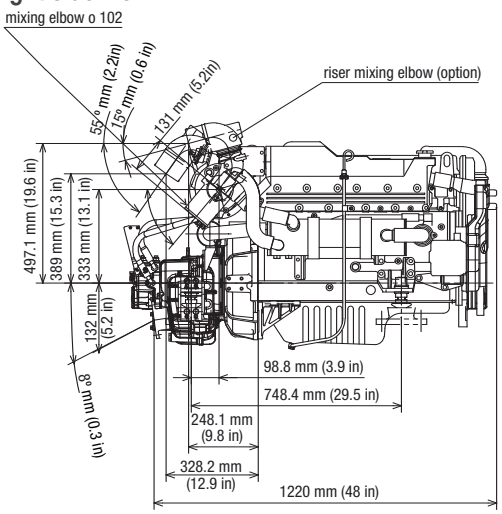
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



Right side view

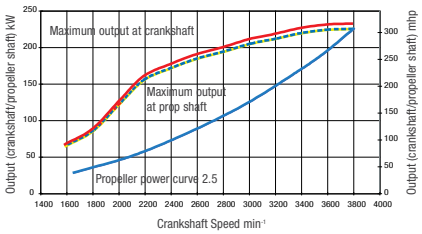


6LPA-STP2 with KM2P-1 marine gear

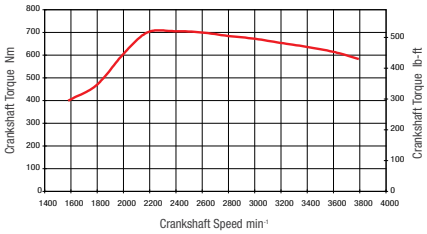
EN_DS6LPA-STP2_0113

PERFORMANCE CURVES

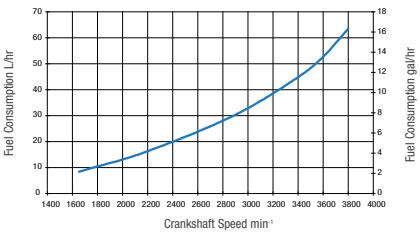
Power


Maximum output at crankshaft
Maximum output at prop shaft
Propeller power curve 2.5
Output (crankshaft/propeller shaft) kW
Output (crankshaft/propeller shaft) mhp
Crankshaft Speed min-1

Torque



Fuel Consumption

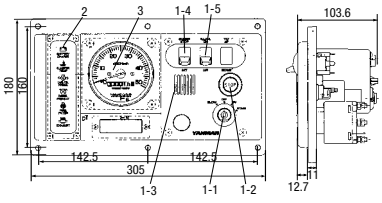


MARINE GEARS / DRIVE

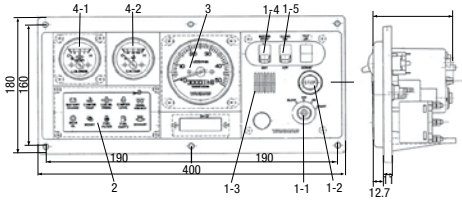
Model	KMH50A			ZF63A			
Type	8° down hydraulic			8° down hydraulic			
Dry weight	43 kg [95 lbs]			44 kg [97 lbs]			
Reduction ratio [fwd/asn]	1.67/1.67	2.13/2.13	2.43/2.43	1.22/1.21	1.56/1.58	2.04/2.10	2.52/2.53
Propeller speed [fwd/asn]	2275	1784	1564	3115/3140	2436/2405	1863/1810	1429/1423
Direction of rotation	Counterclockwise			Counterclockwise			
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side			
Dry weight engine and gear/drive	449 kg [990 lbs]			452 kg [996 lbs]			
Length engine and gear/drive	1190 mm [46.9 in]			1205 mm [47.4 in]			

INSTRUMENT PANELS

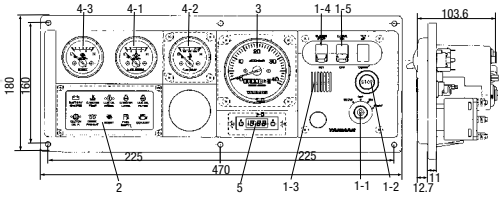
New B-type Panel



New C-type Panel



New D-type Panel



	TYPE OF INSTRUMENT PANEL		
Function	**DIGITAL B-TYPE PANEL**	**NEW C-TYPE PANEL**	**NEW D-TYPE PANEL**
1-Switch unit			
1-1 Key switch for GLOW/OFF/ON/START [4-position switch]	Equipped on panel	Equipped on panel	Equipped on panel
1-2 Engine stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-3 Alarm buzzer [C.W. Temp., L.O. Pressure]	Equipped on panel	Equipped on panel	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel	Equipped on panel	Equipped on panel
2-Alarm lamp unit			
2-1 Battery not charging	Equipped on panel	Equipped on panel	Equipped on panel
2-2 C.W. high temperature	Equipped on panel	Equipped on panel	Equipped on panel
2-3 L.O. low pressure	Equipped on panel	Equipped on panel	Equipped on panel
2-4 F.O. drain seperator	Equipped on panel	Equipped on panel	Equipped on panel
2-5 Sea water flow	Equipped on panel	Equipped on panel	Equipped on panel
2-6 C.W. level for fresh water tank	Not equipped on panel	Equipped on panel	Equipped on panel
2-7 Boost pressure high	Equipped on panel	Equipped on panel	Equipped on panel
3-Tachometer with hour meter	Equipped on panel	Equipped on panel	Equipped on panel
4-Sub meter unit			
4-1 L.O. pressure meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-2 C.W. Temperature meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel	Not equipped on panel	Equipped on panel
5 Quartz clock	Not equipped on panel	Not equipped on panel	Equipped on panel

ACCESORIES

Standard engine package

- Sensor for instrument panel [New B, C and D-type]
- Exhaust/water mixing elbow [L-type]
- Cooling water hoses
- Fuel water separator [integrated with fuel filter]
- Alternator 12V - 80A

Optional accesories

- Flexible mounts [2 pcs] • High-riser mixing elbow [instead of L-elbow]
- Analog instrument panels [New B,C and D-type]
- Dual station Y-harness • Sensor for VDO instrument panels
- Control heads • Extension wire harness [4m, 6m, 10m]
- Lub oil evacuation pump
- Air venting device for cooling water tank
- VDO instrumentation for main panel and fly bridge • Dipstick for opposite side

NOTE: All data subject to change without notice. Text and illustrations are not binding.

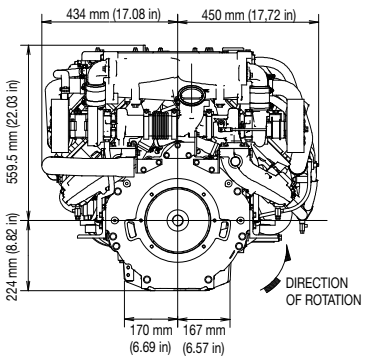
8LV-320/8LV-370 Series

Configuration	4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	235 kW@3800 rpm	[320 mhp@3800 rpm]
	272kW@3800 rpm	[370 mhp@3800 rpm]
Displacement	4.46 ltr	[272.24 cu in]
Bore x stroke	86 mm x 96 mm	[3.38 in x 3.78 in]
Cylinders	8 in V-90°	
Combustion system	Direct injection Common Rail System	
Compression ratio	15:8	
Low Idle rpm	550 rpm	
Aspiration	Turbocharged with twin TC	
Electric system	12V	
Alternator	12V - 180A	
Start-assist	Glow-plug system	
Cooling system	Fresh water cooling by centrifugal fresh water pump	
	Sea water cooling by rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side	
Dry weight without gear	435 kg	[959 lbs]
Environmental	EU: RCD	EMC
	US: EPA Tier3	
Engine mounting	Rubber type flexible mounting	

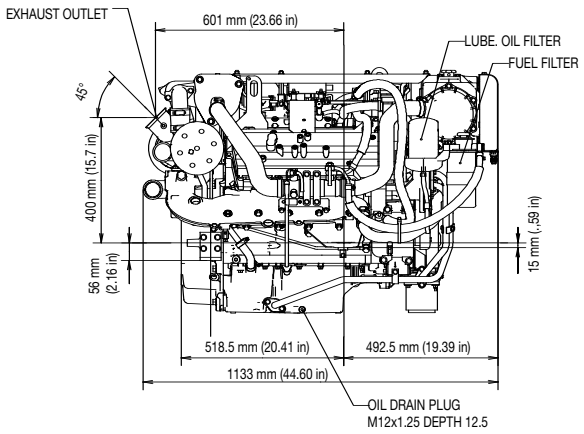
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Gear view

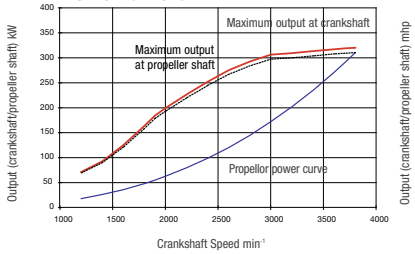


Right side view

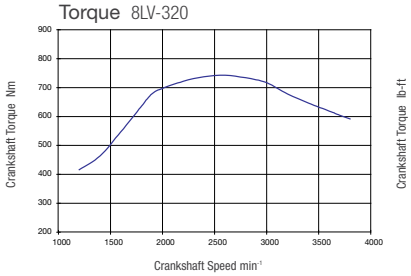


PERFORMANCE CURVES

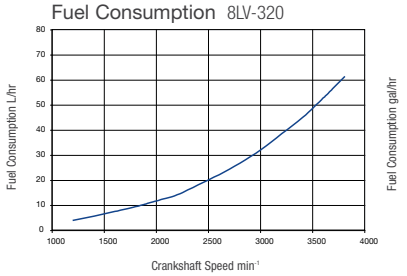
Power 8LV-320



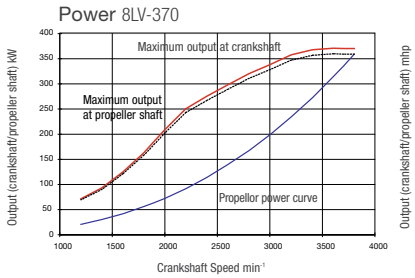
Torque 8LV-320



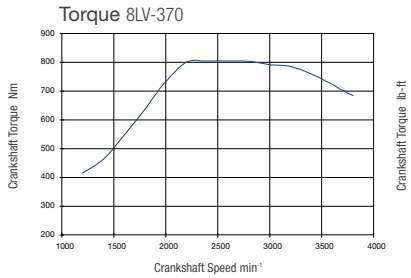
Fuel Consumption 8LV-320



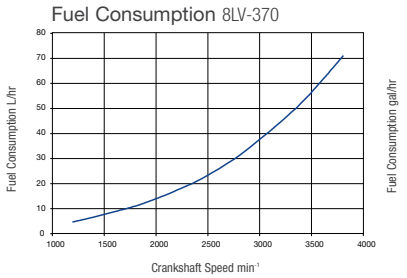
Power 8LV-370



Torque 8LV-370



Fuel Consumption 8LV-370



DRIVE SYSTEMS

Model	**KMH50A [down angle 8°]**		
Type	Hydraulic Actuated Multi-friction disc clutch		
Dry weight	43 kg excl. foot and cooler [=15.5 kg]		
Reduction ratio [fwd/asn]	1.67/1.67	2.13/2.13	2.43/2.43
Direction of rotation	Clockwise & Counterclockwise viewed from the stern		
Lub oil specifications	API class: CF or higher SAE grade #30		
Dry weight engine and gear	494 kg [1089 lbs]		

Model	**KMH52V [integral V-drive 12°]**			
Type	Hydraulic Actuated Multi-friction disc clutch			
Dry weight	59 kg excl. foot and cooler [=20 kg]			
Reduction ratio [fwd/asn]	1.22/1.22	1.58/1.58	2.08/2.08	2.47/2.47
Direction of rotation	Clockwise & Counterclockwise viewed from the stern			
Lub oil specifications	API class: CF or higher SAE grade #30			
Dry weight engine and gear	514 kg [1133 lbs]			

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

CONTROL SYSTEM

- Yanmar CAN-bus control system
- Electronic CAN-bus control-head
- Multi-function colour display
- NMEA2000 or J1939 gauge output
- Second or third station - optional

NOTE: All data subject to change without notice. Text and illustrations are not binding.

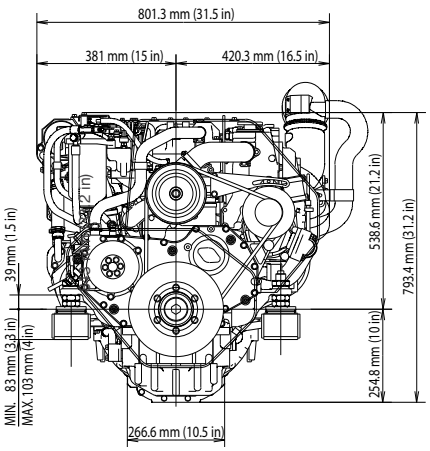
6LY3-UTP Series

Configuration	24 valve, 4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	279 kW@3300 rpm	[380 mhp@3300 rpm]
Displacement	5.813 ltr	[354 cu in]
Bore x stroke	106 mm x 110 mm	[4.17 in x 4.33 in]
Cylinders	6 in line	
Combustion system	Direct injection	
Aspiration	Turbocharged with seawater cooled intercooler	
Starting system	Electric starting 12V - 3 kW	
Alternator	12V - 80A	
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side	
Dry weight without gear	640 kg	[1411 lbs]
Environmental	EU: RCD US: EPA Tier2 IMO: MARPOL 73/78 Annex VI	EMC
Engine mounting	Rubber type flexible mounts	

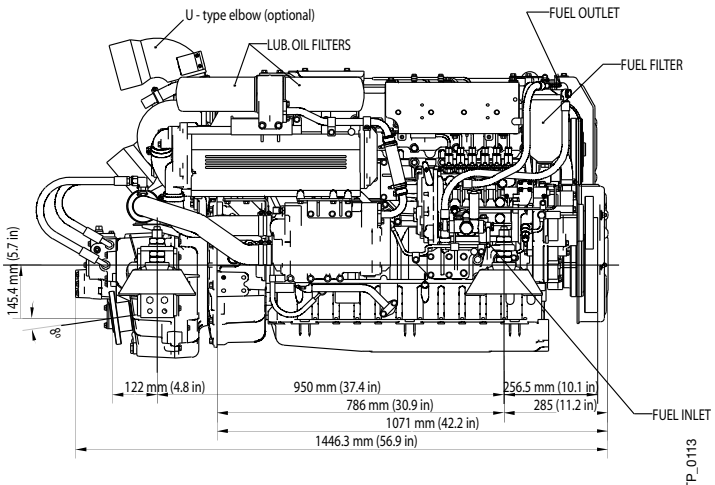
NOTE:
Fuel condition: Density at 15°C = 0.86 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Front view



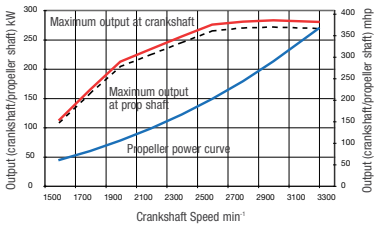
Right side view



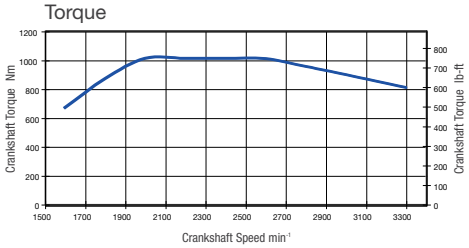
6LY3-UTP with Yanmar KMH61A marine gear

PERFORMANCE CURVES

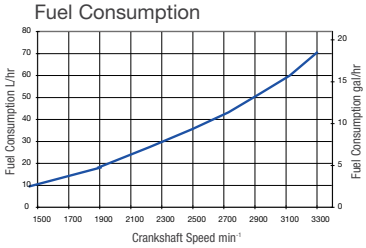
Power



Torque



Fuel Consumption

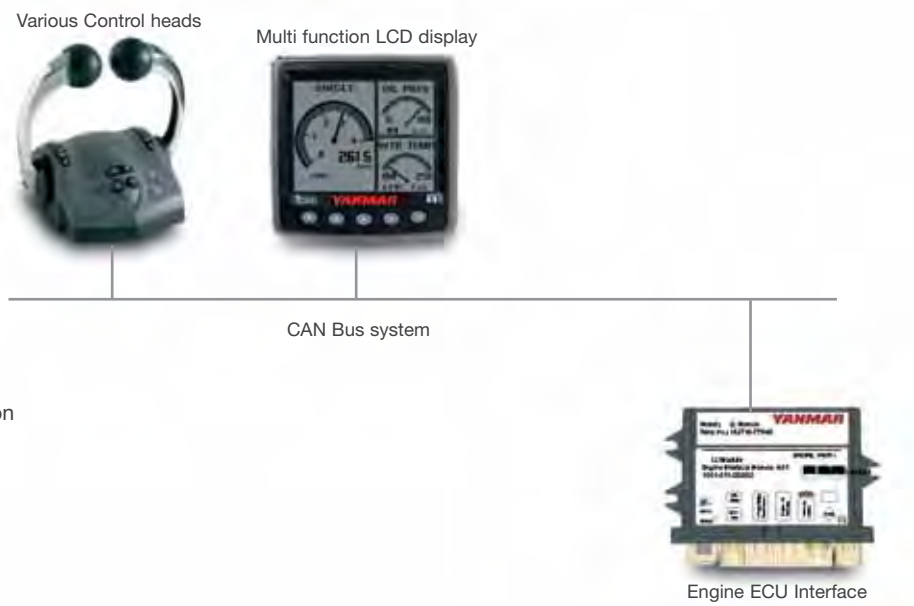


MARINE GEARS / DRIVE

Model	KMH61A			KMH61V			
Type	Hydraulically actuated multi-disc clutch			Hydraulically actuated multi-disc clutch			
Dry weight	78 kg [172 lbs]			83.9 kg [185 lbs]			
Reduction ratio [fwd/asn]	1.55/1.55	2.04/2.04	2.43/2.43	1.24/1.24	1.49/1.49	1.98/1.98	2.43/2.43
Propeller speed [fwd/asn]	2129/2129	1618/1618	1358/1358	2661/2661	2215/2215	1666/1666	1358/1358
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise			
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side			
Dry weight engine and gear/drive	718 kg [1583 lbs]			723.9 kg [1596 lbs]			

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS



Multi function LCD display:
- engine information
- maintenance information
- diagnosis messages

ACCESORIES

Standard engine package
- Standard engine package
- Exhaust mixing elbow [L-type]
- Air heater

Optional engine package
- Fuel/water separator
- High-riser mixing elbow [instead of L-elbow]
- Lub oil evacuation pump
- Remote oil filter opposite side
- Air vent for coolant tank
- Flexible mounts

ELECTRONIC CONTROL SYSTEM

Standard electronic control system
- CANBUS-NMEA 2000 electronic control system
- Ignition panel with rocker switches
- Multi-function LCD display
- Electronic control head

Optional electronic control system:
- Second station kit for flybridge
- Ignition panel with keyswitch
- Extension wire harnesses
- Various control heads
- Trolling mode kit

NOTE: All data subject to change without notice. Text and illustrations are not binding.

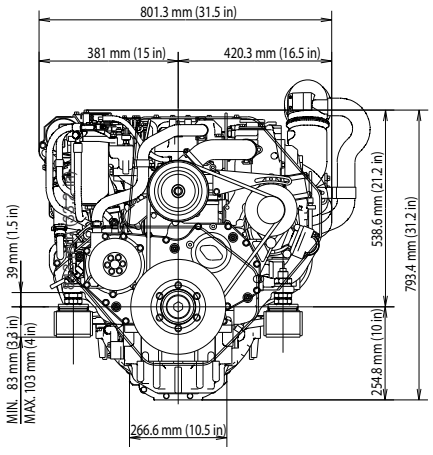
6LY3-STP Series

Configuration	24 valve, 4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	324 kW@3300 rpm	[440 mhp@3300 rpm]
Displacement	5.813 ltr	[354 cu in]
Bore x stroke	106 mm x 110 mm	[4.17 in x 4.33 in]
Cylinders	6 in line	
Combustion system	Direct injection	
Aspiration	Turbocharged with seawater cooled intercooler	
Starting system	Electric starting 12V - 3 kW	
Alternator	12V - 80A	
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side	
Dry weight without gear	640 kg	[1411 lbs]
Environmental	EU: RCD	EMC
	US: EPA Tier2	
	IMO: MARPOL 73/78 Annex VI	
Engine mounting	Rubber type flexible mounts	

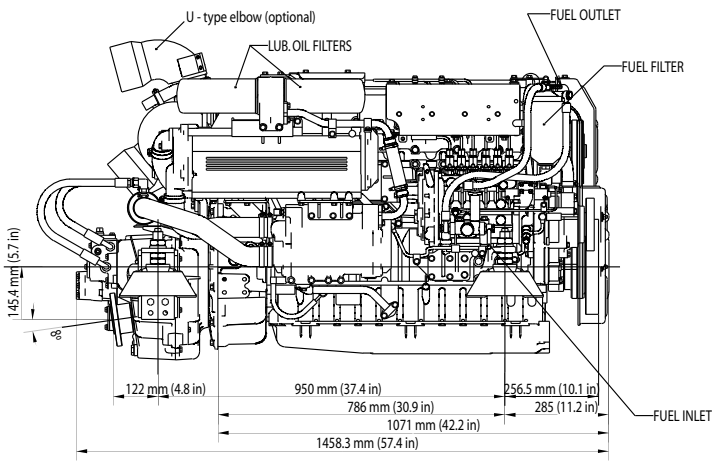
NOTE:
Fuel condition: Density at 15°C = 0.86 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Front view



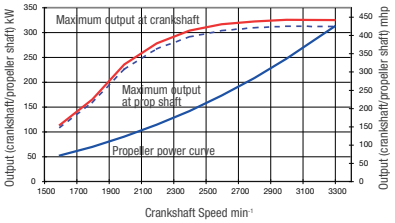
Right side view



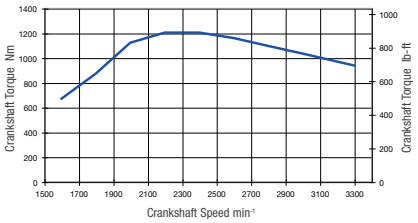
6LY3-STP with Yanmar KMH61A marine gear

PERFORMANCE CURVES

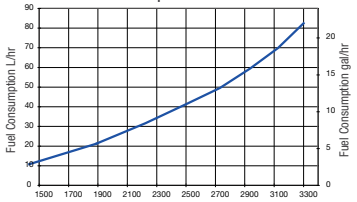
Power



Torque



Fuel Consumption



MARINE GEARS / DRIVE

Model	KMH61A			KMH61V			
Type	Hydraulically actuated multi-disc clutch			Hydraulically actuated multi-disc clutch			
Dry weight	78 kg [172 lbs]			83.9 kg [185 lbs]			
Reduction ratio [fwd/asn]	1.55/1.55	2.04/2.04	2.43/2.43	1.24/1.24	1.49/1.49	1.98/1.98	2.43/2.43
Propeller speed [fwd/asn]	2129/2129	1618/1618	1358/1358	2661/2661	2215/2215	1666/1666	1358/1358
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise			
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side			
Dry weight engine and gear/drive	718 kg [1583 lbs]			723.9 kg [1596 lbs]			

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS

Multi function LCD display:
- engine information
- maintenance information
- diagnosis messages

ACCESORIES

Standard engine package
- Standard engine package
- Exhaust mixing elbow [L-type]
- Air heater

Optional engine package
- Fuel/water separator
- High-riser mixing elbow [instead of L-elbow]
- Lub oil evacuation pump
- Remote oil filter opposite side
- Air vent for coolant tank
- Flexible mounts

ELECTRONIC CONTROL SYSTEM

Standard electronic control system
- CANBUS-NMEA 2000 electronic control system
- Ignition panel with rocker switches
- Multi-function LCD display
- Electronic control head

Optional electronic control system:
- Second station kit for flybridge
- Ignition panel with keyswitch
- Extension wire harnesses
- Various control heads
- Trolling mode kit

NOTE: All data subject to change without notice. Text and illustrations are not binding.

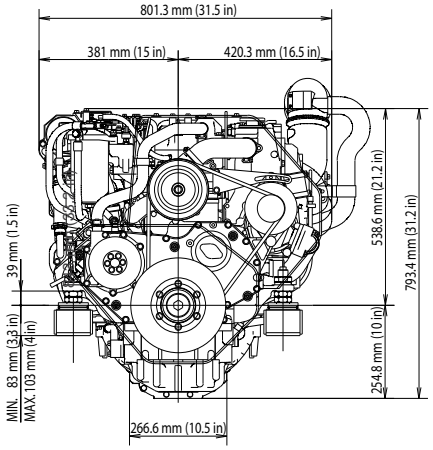
6LY3-ETP Series

Configuration	24 valve, 4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	353 kW@3300 rpm	[480 HP@3300 rpm]
Displacement	5.813 ltr	[354 cu in]
Bore x stroke	106 mm x 110 mm	[4.17 in x 4.33 in]
Cylinders	6 in line	
Combustion system	Direct injection	
Aspiration	Turbocharged with seawater cooled intercooler	
Starting system	Electric starting 12V - 3 kW	
Alternator	12V - 80A	
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side	
Dry weight without gear	640 kg	[1411 lbs]
Environmental	EU: RCD US: EPA Tier2 IMO: MARPOL 73/78 Annex VI	EMC
Engine mounting	Rubber type flexible mounts	

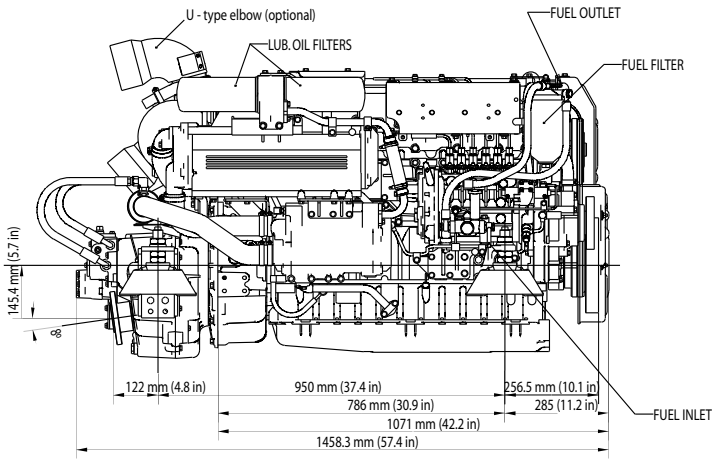
NOTE:
Fuel condition: Density at 15°C = 0.86 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Front view



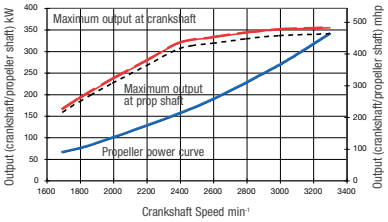
Right side view



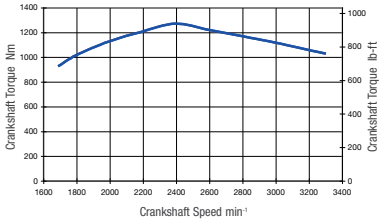
6LY3-ETP with Yanmar KMH61A marine gear

PERFORMANCE CURVES

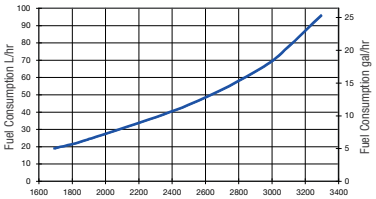
Power



Torque



Fuel Consumption



MARINE GEARS / DRIVE

Model	KMH61A			KMH61V			
Type	Hydraulically actuated multi-disc clutch			Hydraulically actuated multi-disc clutch			
Dry weight	78 kg [172 lbs]			83.9 kg [185 lbs]			
Reduction ratio [fwd/asn]	1.55/1.55	2.04/2.04	2.43/2.43	1.24/1.24	1.49/1.49	1.98/1.98	2.43/2.43
Propeller speed [fwd/asn]	2129/2129	1618/1618	1358/1358	2661/2661	2215/2215	1666/1666	1358/1358
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise			
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side			
Dry weight engine and gear/drive	718 kg [1583 lbs]			723.9 kg [1596 lbs]			

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS

ACCESORIES

Standard engine package

- Alternator 12V - 80A
- Exhaust mixing elbow [L-type]
- Air heater

Optional engine package

- Fuel/water separator
- High-riser mixing elbow [instead of L-elbow]
- Lub oil evacuation pump
- Remote oil filter opposite side
- Air vent for coolant tank
- Flexible mounts

ELECTRONIC CONTROL SYSTEM

Standard electronic control system

- CANBUS-NMEA 2000 electronic control system
- Ignition panel with rocker switches
- Multi-function LCD display
- Electronic control head

Optional electronic control system:

- Second station kit for flybridge
- Ignition panel with keyswitch
- Extension wire harnesses
- Various control heads
- Trolling mode kit

NOTE: All data subject to change without notice. Text and illustrations are not binding.

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MARINE DIESEL ENGINES

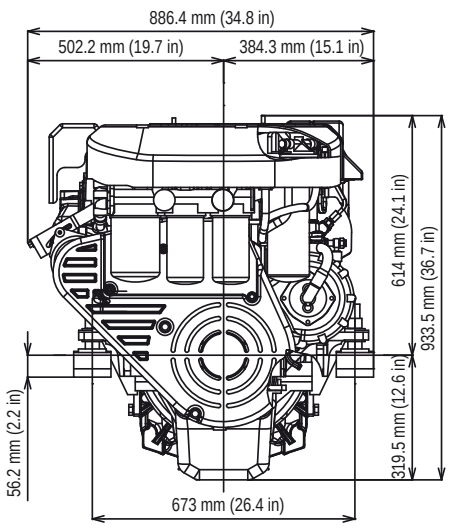
6CX-530 Series

Configuration	4-stroke, vertical, water cooled diesel engine
Maximum output at crankshaft	* 390 kW (530 mhp) / 2900 rpm
Continuous rating output at crankshaft	355 kW (482 mhp) / 2809 rpm
Displacement	7.413 L (452 cu in)
Bore x stroke	110 mm x 130 mm (4.33 in x 5.12 in)
Cylinders	6 in-line
Combustion system	Direct injection
Aspiration	Dry turbocharger with water-cooled jacket, charge-air cooler
Starting system	Electric starting 12 V (24V = optional)
Alternator	12 V - 120 A (24V - 60A = optional)
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump
Lubrication system	Enclosed, forced lubricating system
Direction of rotation (crankshaft)	Counter clockwise viewed from flywheel side
Dry weight without gear	837 kg (1845 lb)
Environmental	EU: RCD, US: EPA Tier2, EMC
Engine mounting	Rubber type flexible mounting

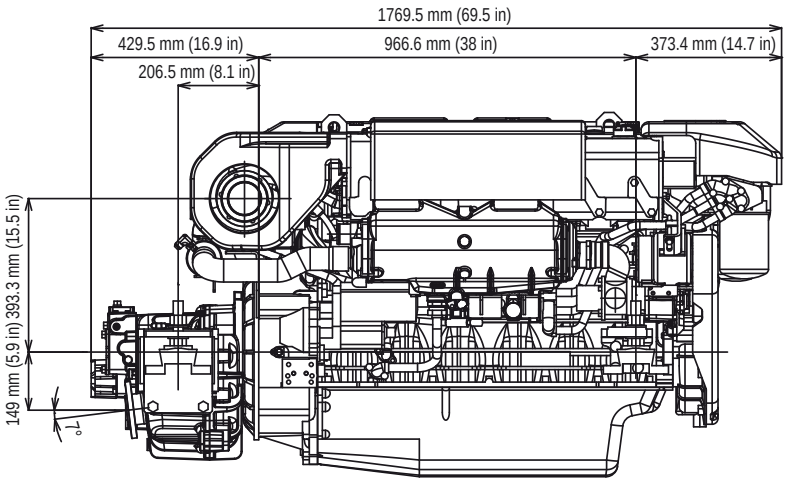
NOTE: Fuel condition: Density at 15°C = 0.84 g/cm 3
* Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665: 2006)

Dimensions (For detailed line-drawings, please refer to our web-site: www.yanmarmarine.com)

Front view



Right side view



6CX-530 with KMH70A

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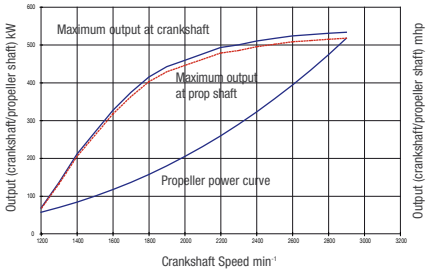
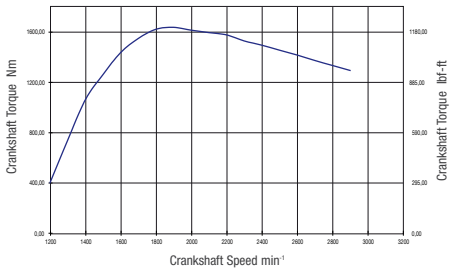
Performance Curves (Output is according ISO 8665 - Output includes +/- 3% tolerance)

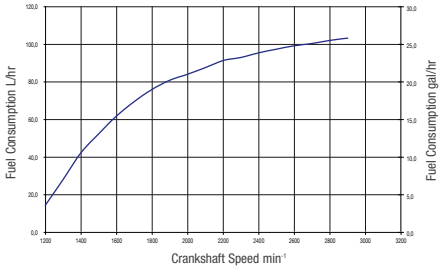
Power



Torque



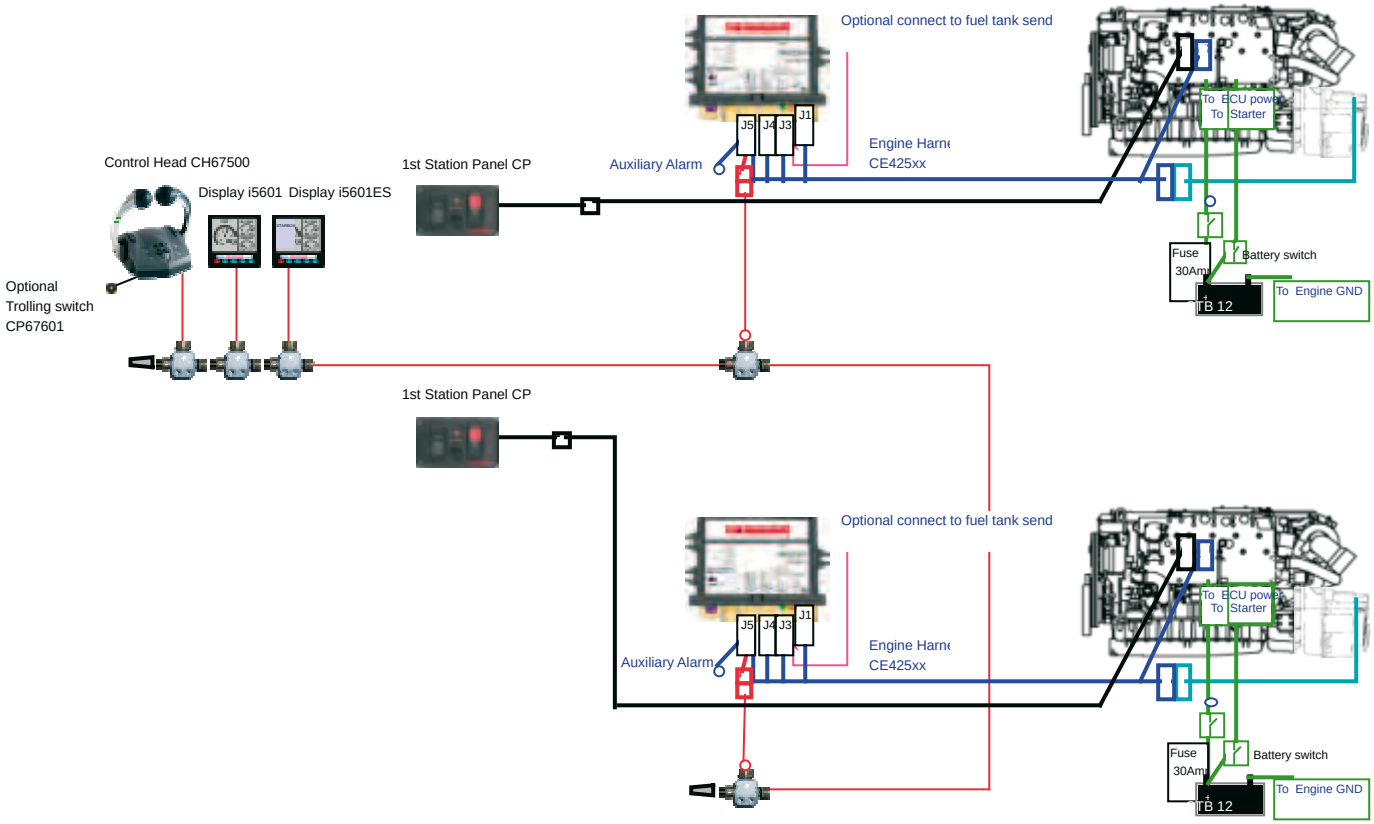
Fuel Consumption



Marine gear

Model	KMH70A			
Type	Multiple disk hydraulic clutch			
Dry weight	77 kg			
Reduction Ratio	2.56	2.07	1.57	1.23
Propeller speed [@2900RPM]	1133	1401	1847	2358
Dry weight engine and gear/drive	914 kg (2015 lb)			

NMEA2000 control system



Accessories

Options:

- Flexible mounts
- NMEA2000 Control heads
- NMEA2000 Display and Gauges
- 24V System

Texts and illustrations are not binding. Yanmar Marine reserves the right to introduce adaptations without prior notification.

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MARINE DIESEL ENGINES

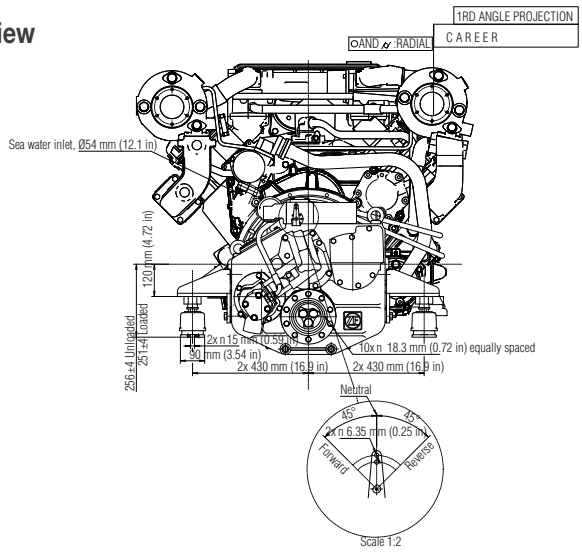
8SY-900 Series

Configuration	4-stroke, vertical, water cooled diesel engine
Maximum output at crankshaft	* 662 kW (900 mhp) / 2300 rpm
Continuous rating output at crankshaft	482 kW (655 mhp) / 2100 rpm
Displacement	15.6 L (952 cu in)
Bore x stroke	127 mm x 154 mm (5.0 in x 6.1 in)
Cylinders	V8-type 90°
Combustion system	Direct injection
Aspiration	Turbocharged with charge air cooler
Starting system	Electric starting 24 V - 6.7 kW (2 pole)
Alternator	24 V - 140 A (2 pole)
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump
Lubrication system	Enclosed, forced lubricating system
Direction of rotation (crankshaft)	Counter clockwise viewed from flywheel side
Dry weight without gear	1650 kg (3638 lbs)
Environmental	EU RCD, US EPA Tier2 & EMC
Engine mounting	Rubber type flexible mounting

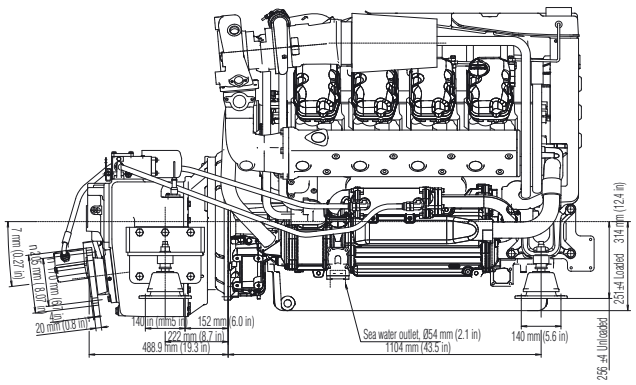
NOTE: Fuel condition: Density at 15°C = 0.84 g/cm³; 1 mhp = 1PS = 0.7355 kW = 0.9863 bhp
* Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665)
Technical data is according to ISO 8665 / 3046

Dimensions (For detailed line-drawings, please refer to our web-site: www.yanmarmarine.com)

Rear view



Right side view



8SY-900 with ZF350A marine gear

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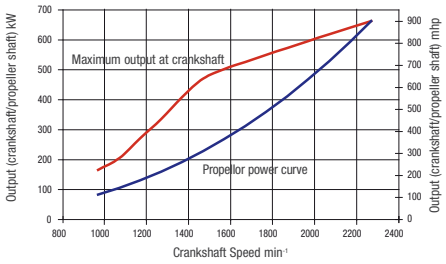
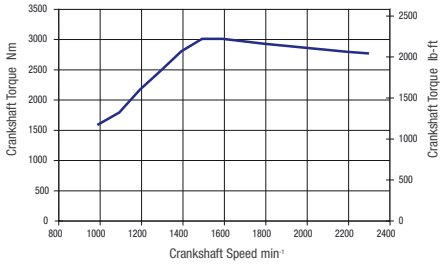
Performance Curves (Output is according ISO 8665)

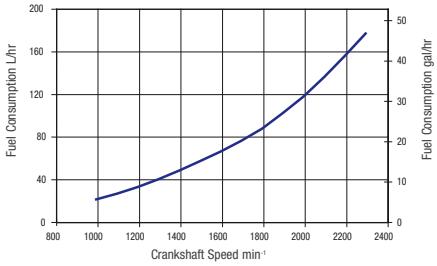
Power



Torque



Fuel Consumption

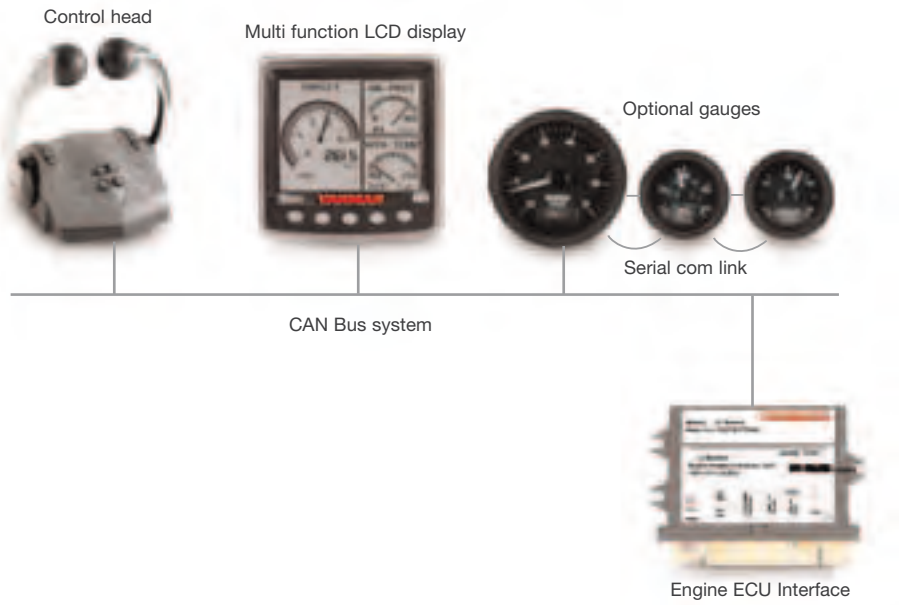


Marine gear (example) ***

Model	ZF 350A	
Dry weight	256 kg (564 lbs)	
Reduction ratio (fwd)	2.1	2.6
Propeller speed (fwd)	1095	885
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from flywheel side	
Dry weight engine and gear/drive	1906 kg (4202 lbs)	
Length engine and gear/drive	1860 mm (73 in)	

*** Gear also available in; ZF350V (V-drive) reduction ration: 2.1, TD MG 5114 IV (V-drive) reduction ratio: 2
*** Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

Electronic Control System (NMEA2000 Canbus System)



Accessories

Standard engine components
- Alternator 24V/140A
- Protection cover for belt transmission
- Transmission oil cooler
- Water level sensor
- Engine control harness
- Standard control system components:
  - Control head
  - LCD display
  - Backup trottle control system

Control system Options
- Second station control system
- Various Engine control heads
- Various engine monitoring gauges
- Various engine flexible mounts

Engine Options
- Electric oil draining pump
- Crankshaft pulley
- Engine heater
- Extra rear PTO
- Hydraulic pump
- Exhaust mixing elbow

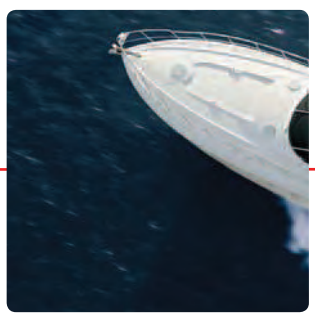
Texts and illustrations are not binding. Yanmar Marine reserves the right to introduce adaptations without prior notification.
Version: 2011-09

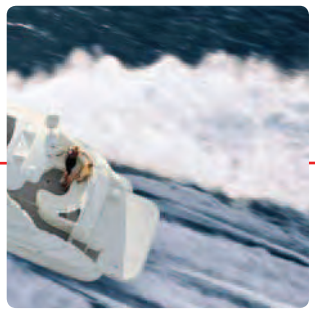
ZT370 STERNDRIVE

YANMAR ZT370 STERNDRIVE

Designed, built and proven by Yanmar, the all-new ZT370 sterndrive is the perfect transmission match for the Yanmar LV, BY2 and LP Series diesel engines, unsurpassed for new installations and ideal for repowering. This quiet, hydrodynamic sterndrive has a new type of hydraulic clutch for exceptional smoothness, precision forged gears for extra-long life, two counter-rotating propellers for superb acceleration and tight-hold tracking, and large rudder dimensions for superior handling, whether your boat is single or twin installation.

- Hydraulic clutch for shockless engagement
- Mechanical / Electro Magnetic shift
- Precision-forged gears for long life
- Complete with power steering and trim
- Reduction ratios 1.65 / 1.78 / 1.97 / 2.18
- Yanmar propellers





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MARINE DIESEL ENGINES

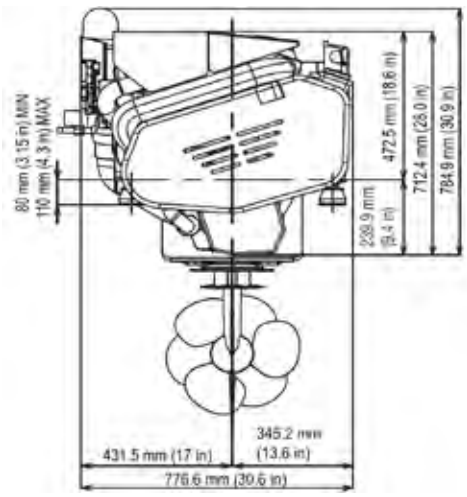
4BY3-150Z / 4BY3-180Z

Configuration	4-stroke, water-cooled diesel engine		
Maximum output at crankshaft	110 kW@4000 rpm	[150 mhp@4000 rpm]	
	132 kW@4000 rpm	[180 mhp@4000 rpm]	
Displacement	1.995 ltr	[122 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	4 in line		
Combustion system	Direct injection with Bosch Common Rail System		
Aspiration	Turbocharger + charge air cooler		
Low Idle rpm	650 - 950 rpm	[adjustable]	
Electric system	12V		
Alternator	12V - 150A		
Start-assist	Glow-plug system		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	Sea water cooling by rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	269 kg	[593 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier3		
Engine mounting	Rubber type flexible mounting		

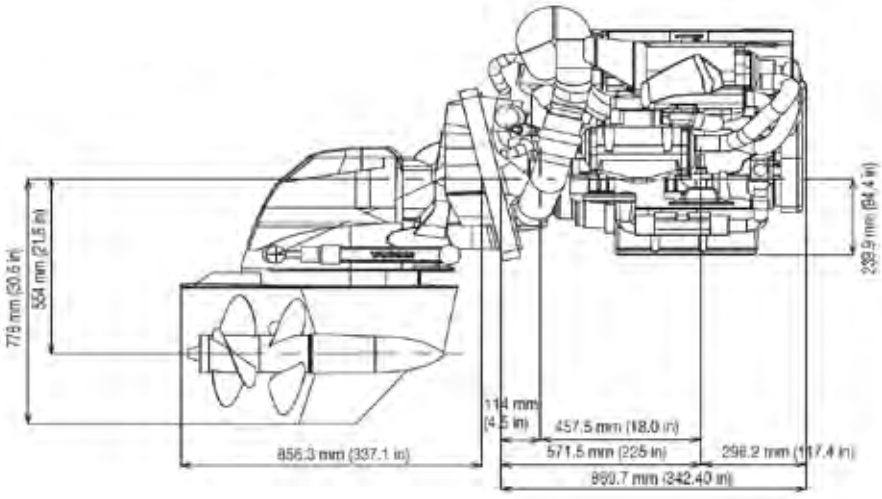
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

FRONT VIEW



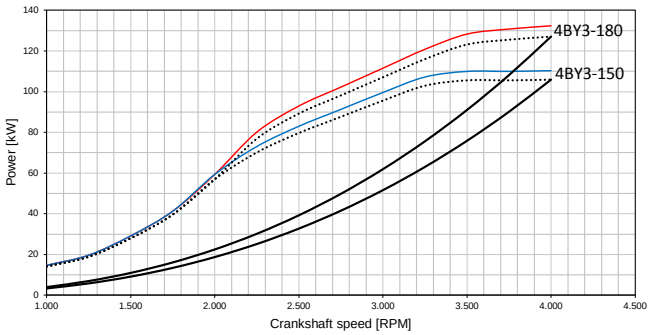
RIGHT SIDE VIEW

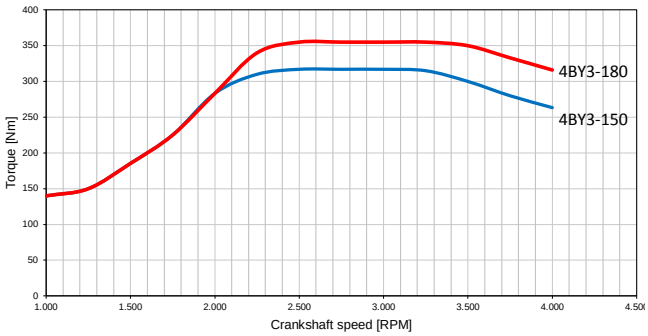


6BY3-260Z with ZT370 Sterndrive

EN_DS4BY3Z_0113

PERFORMANCE CURVES





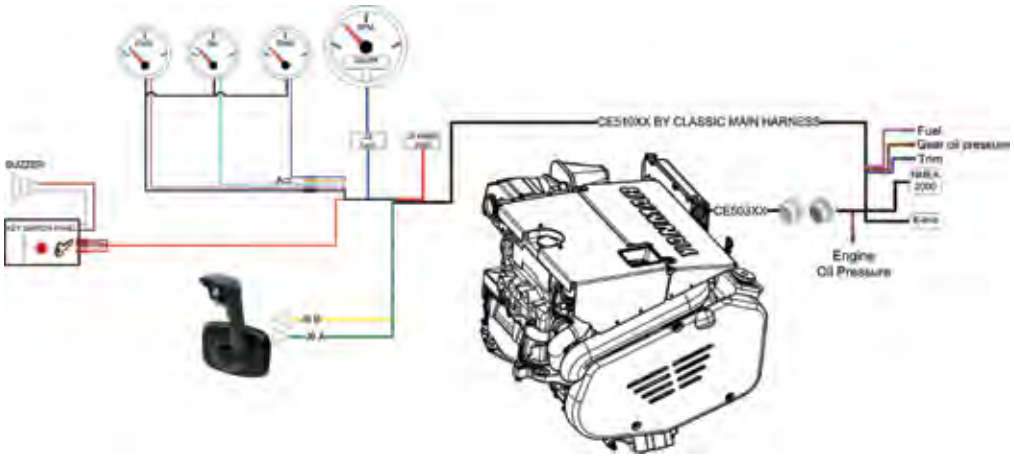
DRIVE SYSTEMS

Model	**ZT370 Steerable Z-drive with duo-propeller**			
Type	Hydraulic Actuated Multi-friction disc Sterndrive			
Dry weight	69 kg [drive] / 46 kg [Transom + trim-pump] / 15 kg [Propellers]			
Reduction ratio [fwd/asn]	1.65	1.78	1.65	2.18
Propeller speed [fwd/asn]	2424	2247	2424	1835
Direction of rotation	Clockwise [rear propeller] / Counterclockwise [front propeller]			
Lub oil specifications	API class: GL5 SAE grade #80W90 or QuickSilver High Performance Gearlube			
Dry weight - engine & gear	388 kg			

Model	**Mercruiser Bravo 1 Steerable Z-drive with single propeller**			
Type	Mechanical cone-clutch type Sterndrive			
Dry weight	59 kg [drive] / 48 kg [Transom + trim-pump] / 8 kg [Propeller]			
Reduction ratio [fwd/asn]	1.36	1.5	1.65	
Propeller speed [fwd/asn]	2424	2667	2424	
Direction of rotation	Clockwise & Counterclockwise viewed from the stern			
Lub oil specifications	Mercury High Performance Gearlube			
Dry weight - engine & gear	373 kg			

1 - Inner and outer transom surface must be parallel within 3mm in area covered by transom plates and remain within transom thickness limits.
2 - Area covered by gimbal housing assembly must be flat to within 1.6 mm.
3 - Area covered by inner transom plate must be flat to within 3.2 mm.
4 - Transom angle: 13° to 16°.
5 - Also available with Bravo X-2 drive's, please contact your local supplier for support.

CONTROL SYSTEM "CLASSIC"



ENGINE ACCESORIES

Standard engine package
- Single pole, 150A Alternator
- High-riser mixing exhaust elbow
- Automatic glow-plug controller
- Flexible engine mounting
- Analogue throttle with redundancy function

Optional accesories
- Through transom exhaust
- Exhaust-side 2nd dipstick
- Electric gearshift
- NMEA2000 digital display
- Various monitoring gauges
- Full NMEA2000 electronic control system [CAN-bus]

Propellers
- Propeller size
  20" - 22" - 24" - 26" - 28"
- Propellers with cup
  24"- 26"

NOTE: All data subject to change without notice. Text and illustrations are not binding.

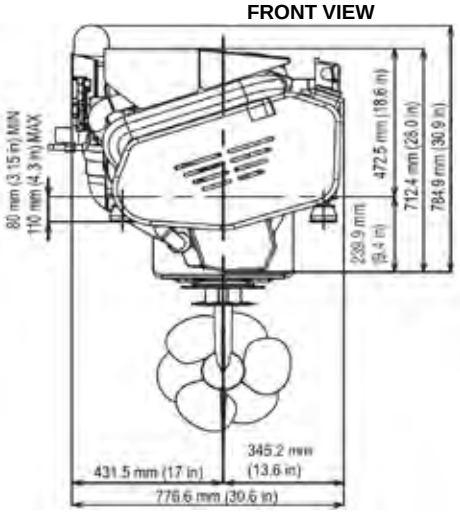
6BY3-220Z / 6BY3-260Z

Configuration	4-stroke, water-cooled diesel engine		
Maximum output at crankshaft	162 kW@4000 rpm	[220 mhp@4000 rpm]	
	191 kW@4000 rpm	[260 mhp@4000 rpm]	
Displacement	2.993 ltr	[183 cu in]	
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]	
Cylinders	6 in line		
Combustion system	Direct injection with Bosch Common Rail System		
Aspiration	Turbocharger + charge air cooler		
Low Idle rpm	650 - 950 rpm	[adjustable]	
Electric system	12V		
Alternator	12V - 150A		
Start-assist	Glow-plug system		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	Sea water cooling by rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	328 kg	[723 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier3		
	IMO: MARPOL 73/78 Annex VI		
Engine mounting	Rubber type flexible mounting		

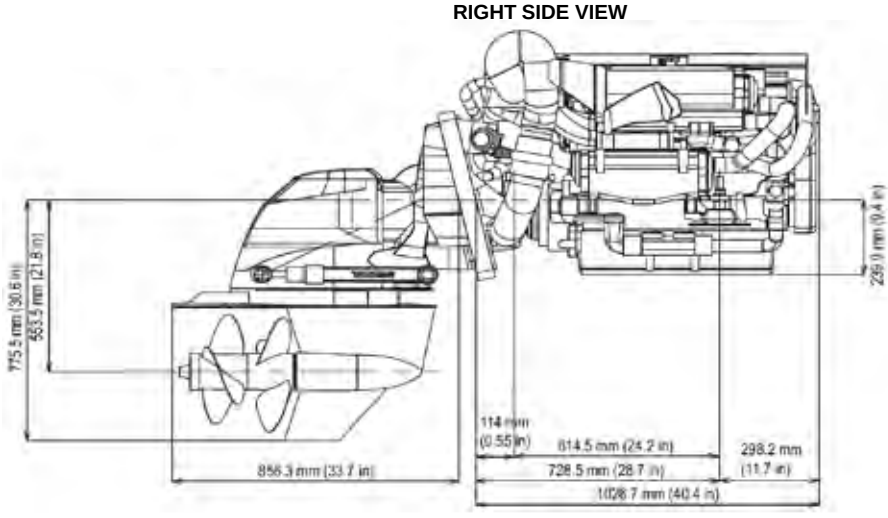
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

FRONT VIEW

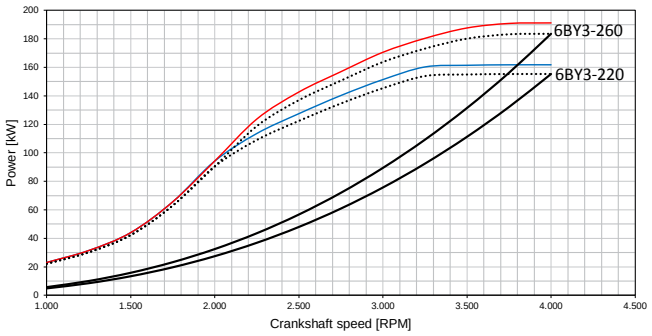


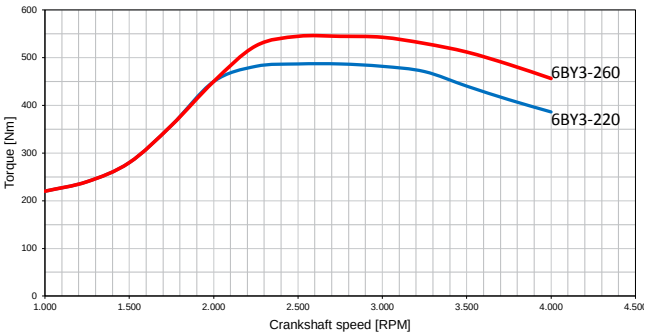
RIGHT SIDE VIEW



6BY3-260Z with ZT370 Sterndrive

PERFORMANCE CURVES





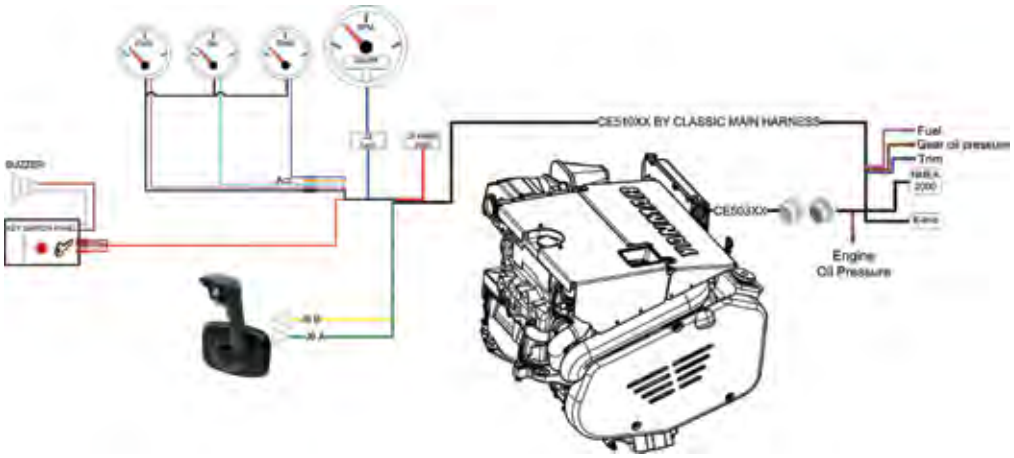
DRIVE SYSTEMS

Model	**ZT370 Steerable Z-drive with duo-propeller**			
Type	Hydraulic Actuated Multi-friction disc Sterndrive			
Dry weight	69 kg [drive]/46 kg [Transom + trim-pump]/15 kg [Propellers]			
Reduction ratio [fwd/asn]	1.65	1.78	1.65	2.18
Propeller speed [fwd/asn]	2424	2247	2424	1835
Direction of rotation	Clockwise [rear propeller]/Counter clockwise [front propeller]			
Lub oil specifications	API class: GL5 SAE grade #80W90 or QuickSilver High Performance Gearlube			
Dry weight - engine & gear	445 kg			

Model	**Mercruiser Bravo 1 Steerable Z-drive with single propeller**		
Type	Mechanical cone-clutch type Sterndrive		
Dry weight	59 kg [drive]/48 kg [Transom + trim-pump]/8 kg [Propeller]		
Reduction ratio [fwd/asn]	1.36	1.5	1.65
Propeller speed [fwd/asn]	2424	2667	2424
Direction of rotation	Clockwise & Counterclockwise viewed from the stern		
Lub oil specifications	Mercury High Performance Gearlube		
Dry weight - engine & gear	430 kg		

1 - Inner and outer transom surface must be parallel within 3 mm in area covered by transom plates and remain within transom thickness limits.
2 - Area covered by gimbal housing assembly must be flat to within 1.6 mm.
3 - Area covered by inner transom plate must be flat to within 3.2 mm.
4 - Transom angle: 13° to 16°.
5 - Also available with Bravo X-2 drive's, please contact your local supplier for support.

CONTROL SYSTEM "CLASSIC"



ENGINE ACCESORIES

Standard engine package
- Single pole, 150A alternator
- High-riser mixing exhaust elbow
- Automatic glow-plug controller
- Flexible engine mounting
- Analogue throttle with redundancy function

Optional accesories
- Through transom exhaust
- Exhaust-side 2nd dipstick
- Electric gearshift
- NMEA2000 digital display
- Various monitoring gauges
- Full NMEA2000 electronic control system [CAN-bus]

Propellers
- Propeller size
  20" - 22" - 24" - 26" - 28"
- Propellers with cup
  24"- 26"

NOTE: All data subject to change without notice. Text and illustrations are not binding.

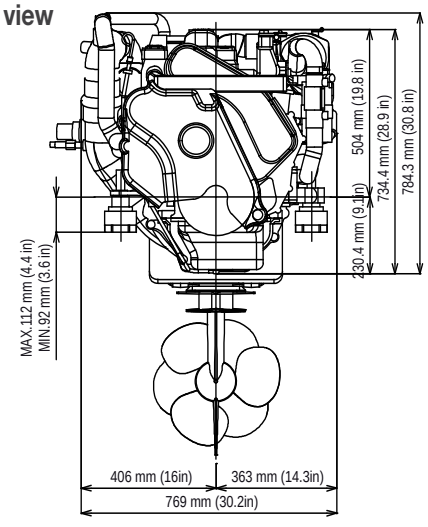
6LPA-STZP2 Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 232 kW@3800 rpm	[315 mhp@3800 rpm]	
	** 225 kW@3800 rpm	[306 mhp@3800 rpm]	
Displacement	4.164 ltr	[254 cu in]	
Bore x stroke	94 mm x 100 mm	[3.7 in x 3.94 in]	
Cylinders	6 in line, 4-valves per cylinder		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electric starting 12V - 2.5 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	428 kg	[944 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier2		
	IMO: MARPOL 73/78 Annex VI		
Engine mounting	Rubber type flexible mounting		

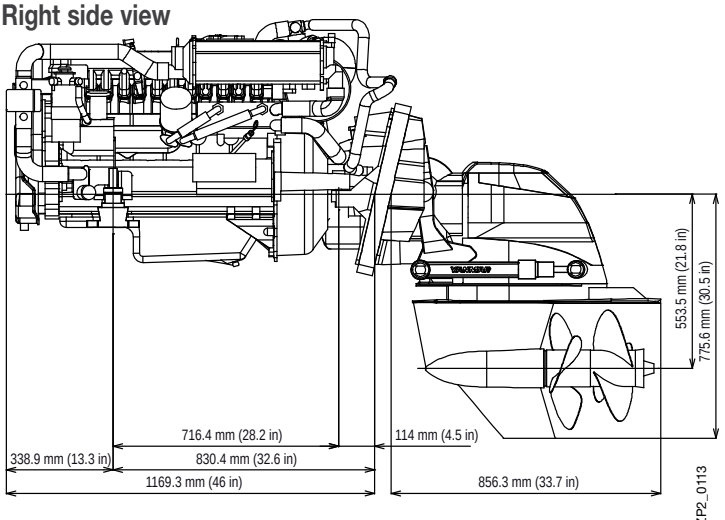
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



Right side view

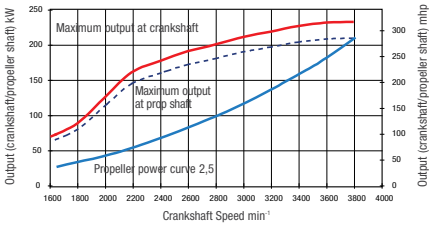


6LPA-STZP2 with KM2P-1 marine gear

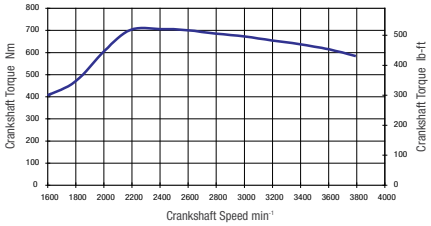
EN_DS6LPA-STZP2_0113

PERFORMANCE CURVES

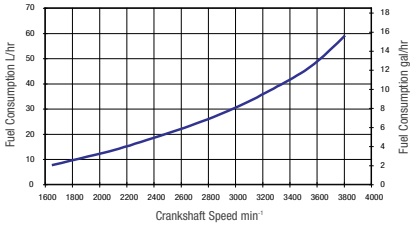
Power


Maximum output at crankshaft
Maximum output at prop shaft
Propeller power curve 2,5
Output (crankshaft/propeller shaft) kW
Output (crankshaft/propeller shaft) mhp
Crankshaft Speed min-1

Torque



Fuel Consumption

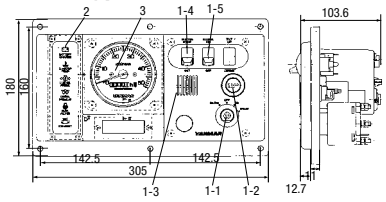


MARINE GEARS / DRIVE

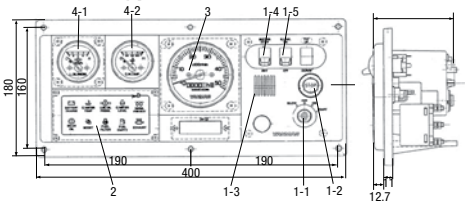
Model	**ZT370 [Steerable Z-drive with dual prop]**	
Type	Hydraulic Actuated Multi-friction disc clutch	
Dry weight	100 kg	
Reduction ratio [fwd/asn]	1.65/1.65	1.78/1.78
Propeller speed [fwd/asn]	2424/2424	2247/2247
Direction of rotation viewed from the stern	Clockwise [rear prop] & Counterclockwise [front prop]	
Lub oil specifications	API class: GL5 SAE grade #80W90	
Dry weight engine with sterndrive	550 kg [1213 lbs]	
Shift control	Mechanical or Electro-magnetic	
Trim range	-6° -+ 10°	
Trailer limit	51°	

INSTRUMENT PANELS

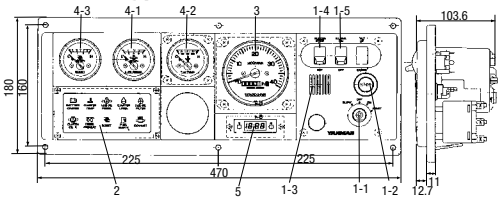
New B-type Panel



New C-type Panel



New D-type Panel



	TYPE OF INSTRUMENT PANEL		
Function	**DIGITAL B-TYPE PANEL**	**DIGITAL B-TYPE PANEL**	**DIGITAL B-TYPE PANEL**
1-Switch unit			
1-1 Key switch for GLOW/OFF/ON/START [4-position switch]	Equipped on panel	Equipped on panel	Equipped on panel
1-2 Engine stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-3 Alarm buzzer [C.W. Temp., L.O. Pressure]	Equipped on panel	Equipped on panel	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel	Equipped on panel	Equipped on panel
2-Alarm lamp unit			
2-1 Battery not charging	Equipped on panel	Equipped on panel	Equipped on panel
2-2 C.W. high temperature	Equipped on panel	Equipped on panel	Equipped on panel
2-3 L.O. low pressure	Equipped on panel	Equipped on panel	Equipped on panel
2-4 F.O. drain seperator	Equipped on panel	Equipped on panel	Equipped on panel
2-5 Sea water flow	Equipped on panel	Equipped on panel	Equipped on panel
2-6 C.W. level for fresh water tank	Not equipped on panel	Equipped on panel	Equipped on panel
2-7 Boost pressure high	Not equipped on panel	Equipped on panel	Equipped on panel
3-Tachometer with hour meter	Equipped on panel	Equipped on panel	Equipped on panel
4-Sub meter unit	Not equipped on panel		
4-1 L.O. pressure meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-2 C.W. Temperature meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel	Not equipped on panel	Equipped on panel
5 Quartz clock	Not equipped on panel	Not equipped on panel	Equipped on panel

ACCESORIES

Standard engine package

- Sensor for instrument panel [New B, C and D-type]
- Exhaust/water mixing elbow [L-type]
- Cooling water hoses
- Fuel water separator [integrated with fuel filter]
- Alternator 12V - 80A

Optional accesories

- Flexible mounts [2 pcs]
- High-riser mixing elbow [instead of L-elbow]
- Analog instrument panels [New B,C and D-type]
- Dual station Y-harness • Sensor for VDO instrument panels
- Control heads • Extension wire harness [4m, 6m, 10m] • Lub oil evacuation pump
- Air venting device for cooling water tank
- VDO instrumentation for main panel and fly bridge • Dipstick for opposite side

NOTE: All data subject to change without notice. Text and illustrations are not binding.

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EN_DS6LPA-STZP2_0113

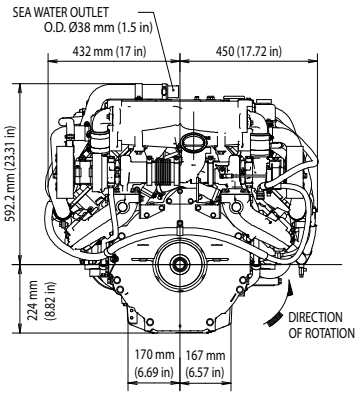
8LV-320Z/8LV-370Z Series

Configuration	4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	235 kW@3800 rpm	[320 mhp@3800 rpm]
according ISO 8665: 2006	272 kW@3800 rpm	[370 mhp@3800 rpm]
Displacement	4.46 ltr	[272.24 cu in]
Bore x stroke	86 mm x 96 mm	[3.38 in x 3.78 in]
Cylinders	8 in V-90°	
Combustion system	Direct injection Common Rail System	
Compression ratio	15:8	
Low Idle rpm	550 rpm	
Aspiration	Turbocharged with twin TC	
Electric system	12V	
Alternator	12V - 180A	
Start-assist	Glow-plug system	
Cooling system	Fresh water cooling by centrifugal fresh water pump	
	Sea water cooling by rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side	
Dry weight without gear	435 kg	[959 lbs]
Environmental	EU: RCD	EMC
	US: EPA Tier3	
Engine mounting	Rubber type flexible mounting	

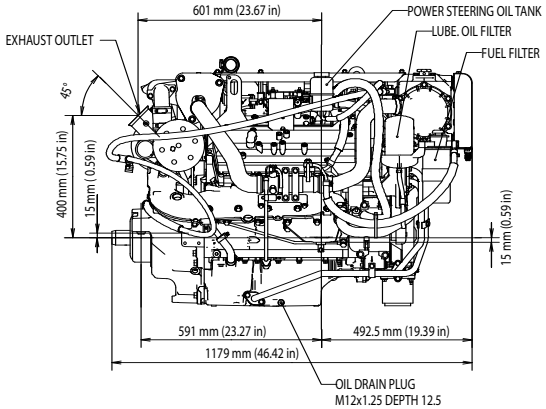
NOTE:
Fuel condition: Density at 15°C = 0.84 g/cm³
Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Gear view



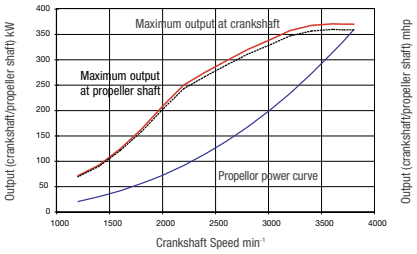
Right side view



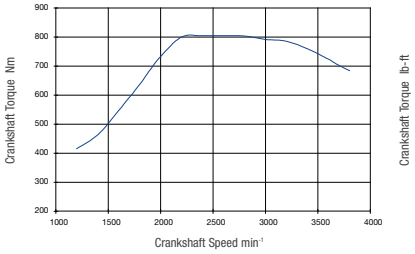
8LV-320Z/8LV-370Z

PERFORMANCE CURVES

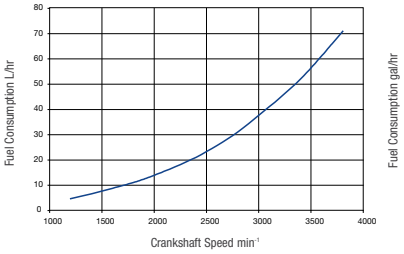
Power 8LV-370



Torque 8LV-370



Fuel Consumption 8LV-370



DRIVE SYSTEMS

Model	**ZT370 [Steerable Z-drive with dual prop]**	
Type	Hydraulic actuated multi-friction disc clutch	
Dry weight with propellers	112 kg [247 lbs]	
Reduction ratio [fwd/asn]	1.65/1.65	1.78/1.78
Propellor speed	2424/2424	2247/2247
Direction of rotation viewed from the stern	Clockwise [rear prop] & Counterclockwise [front prop]	
Lub oil specifications	API class: GL5 SAE grade #80W90	
Dry weight engine with sterndrive	547 kg [1205 lbs]	
Shift control	Mechanical or electro-magnetic	
Trim range	-6° - +10°	
Trailer limit	51°	

CONTROL SYSTEM

- Yanmar CAN-bus control system
- Electronic CAN-bus control-head
- Multi-function colour display
- NMEA2000 or J1939 gauge output
- Second or third station - optional

NOTE: All data subject to change without notice. Text and illustrations are not binding.

YANMAR
Solutioneering Together

MARINE DIESEL ENGINES

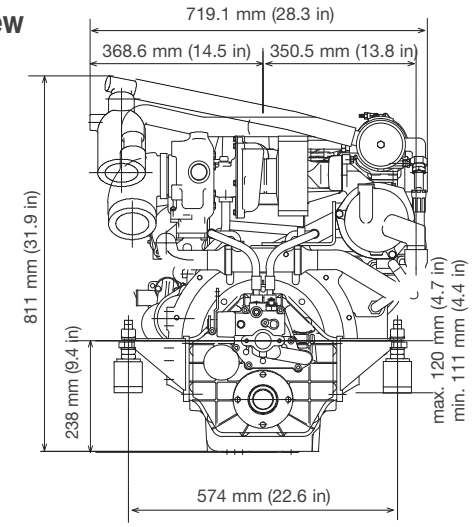
4LHA-HTP Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 118 kW@3300 rpm	[160 mhp@3300 rpm]	
	** 113 kW@3300 rpm	[154 mhp@3300 rpm]	
Displacement	3.455 ltr	[211 cu in]	
Bore x stroke	100 mm x 110 mm	[3.94 in x 4.33 in]	
Cylinders	4 in line		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electrical starting 12V		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	and rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	360 kg	[794 lbs]	
Environmental	EU: RCD	BSO II	EMC
	SOLAS MED 96/98/EC		
Engine mounting	Rubber type flexible mounting		

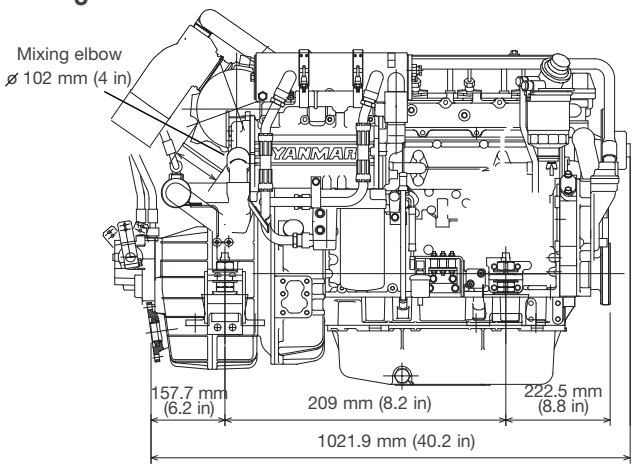
NOTE:
Fuel condition: Density at 15°C = 0.842 g/cm³; 1 mhp = 1 ps = 0.7355 kW = 0.9863 bhp
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



Right side view

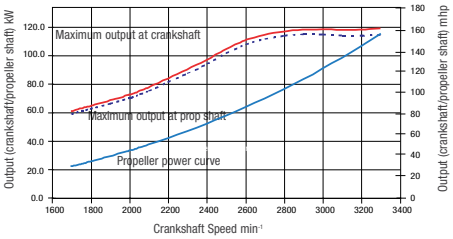


4LHA-HTP with ZF45A marine gear

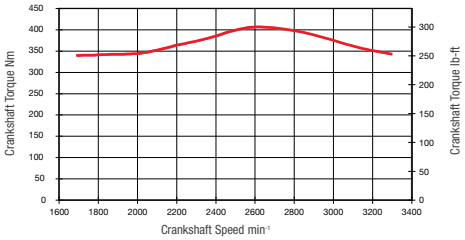
EN_DS4LHA-HTP_0113

PERFORMANCE CURVES (Output is according ISO 8665 - Output includes +/- 3% tolerance

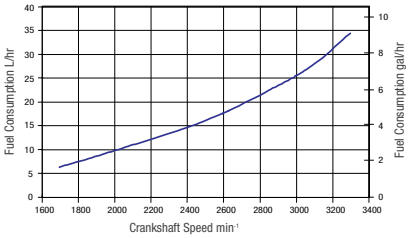
Power



Torque



Fuel Consumption



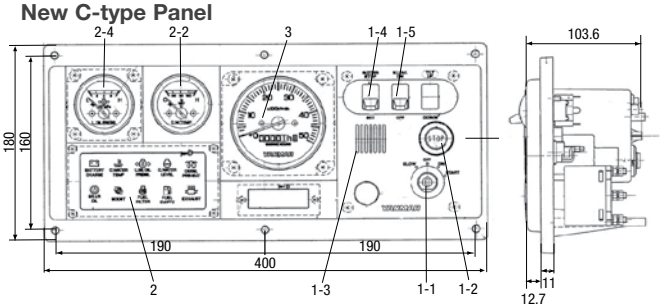
MARINE GEARS*

Model	KMH50A			ZF63A			
Type	8° down hydraulic			8° down hydraulic			
Dry weight	44 kg [97 lbs]			28 kg [62 lbs]			
Reduction ratio [fwd/asn]	1.67/1.67	2.13/2.13	2.43/2.43	1.26/1.26	1.51/1.51	2.03/2.03	2.44/2.44
Propeller speed [fwd/asn]	1976/1976	1549/1549	1358/1358	2627/2627	2180/2180	1622/1622	1355/1355
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise			
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side			
Dry weight engine and gear/drive	404 kg [891 lbs]			388 kg [855 lbs]			

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS

New C-type Panel



Function	TYPE OF INSTRUMENT PANEL NEW C-TYPE PANEL
1-Switch unit	
1-1 Key switch for GLOW/OFF/ON/START [4-position switch]	Equipped on panel
1-2 Push button switch for engine stop	Equipped on panel
1-3 Moisture cap for key switch	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel
2-Alarm lamp unit	
Battery not charging	Equipped on panel
C.W. high temperature	Equipped on panel
L.O. low pressure	Equipped on panel
Boost pressure high [for 4LHA-STP]	Equipped on panel
3-Tachometer with hour meter	Equipped on panel
4-Sub meter unit	Equipped on panel
4-1 L.O. pressure meter	Equipped on panel
4-2 C.W. Temperature meter	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel
5-Quartz clock	Not equipped on panel

ACCESSORIES

Standard Package
- Sensor for various panels
- Exhaust/water mixing elbow [L-type]
- Cooling water hoses
- Alternator 12V - 80A

Optional
- Flexible mounts
- High-riser/water mixing elbow [instead of L-elbow]
- New C-type instrument panels
- Dual station Y harness
- Dipstick for opposite side
- Air venting device for cooling water tank

NOTE: All data subject to change without notice. Text and illustrations are not binding.

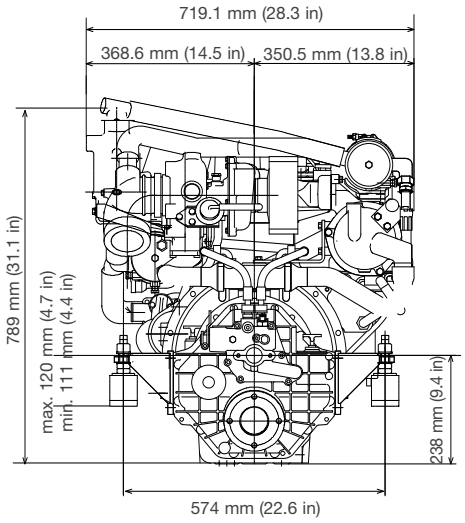
4LHA-DTP Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 147 kW@3300 rpm	[200 mhp@3300 rpm]	
	** 140 kW@3300 rpm	[190 mhp@3300 rpm]	
Displacement	3.455 ltr	[211 cu in]	
Bore x stroke	100 mm x 110 mm	[3.94 in x 4.33 in]	
Cylinders	4 in line		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electrical starting 12V		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	and rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	365 kg	[805 lbs]	
Environmental	EU: RCD	BSO II	EMC
	SOLAS MED 96/98/EC		
Engine mounting	Rubber type flexible mounting		

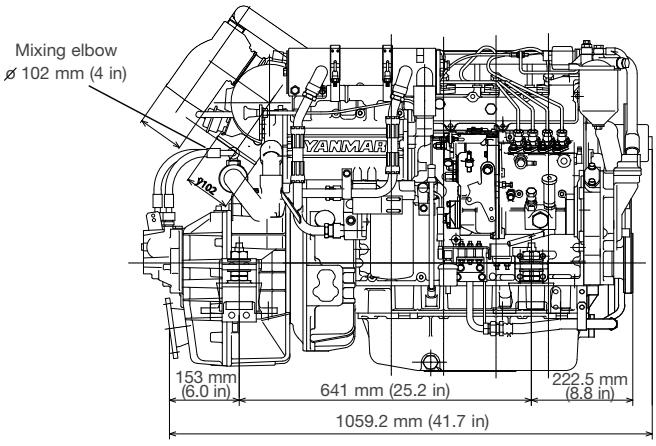
NOTE:
Fuel condition: Density at 15°C = 0.842 g/cm^3; 1 mhp = 1 ps = 0.7355 kW = 0.9863 bhp
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



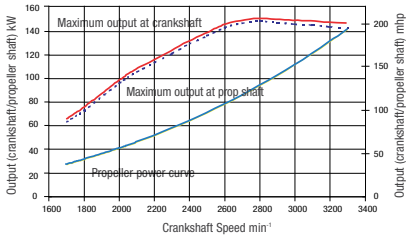
Right side view



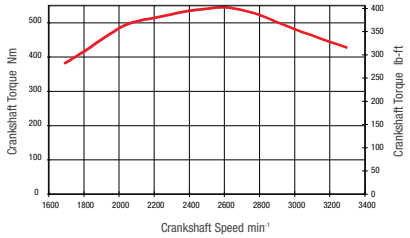
4LHA-DTP with ZF63A marine gear

PERFORMANCE CURVES (Output is according ISO 8665 - Output includes +/- 3% tolerance)

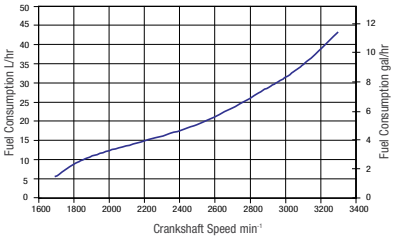
Power



Torque



Fuel Consumption



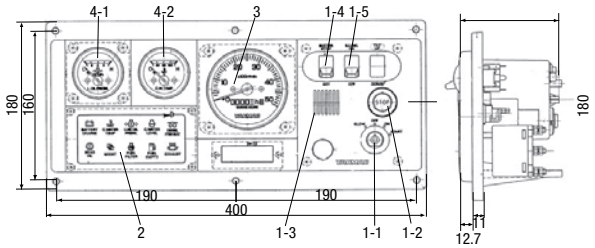
MARINE GEARS*

Model	KMH50A			ZF63A				
Type	8° down hydraulic			8° down hydraulic				
Dry weight	44 kg [97 lbs]			28 kg [62 lbs]				
Reduction ratio [fwd/asn]	1.67/1.67	2.13/2.13	2.43/2.43	1.22/1.22	1.56/1.58	2.04/2.02	2.52/2.54	2.68/2.71
Propeller speed [fwd/asn]	1976/1976	1549/1549	1358/1358	2714/2716	2111/2085	1620/1636	1308/1301	1230/1218
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise				
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side				
Dry weight engine and gear/drive	409 kg [902 lbs]			393 kg [866 lbs]				

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS

New C-type Panel



	TYPE OF INSTRUMENT PANEL
Function	**NEW C-TYPE PANEL**
1-Switch unit	
1-1 Key switch for GLOW/OFF/ON/START [4-position switch]	Equipped on panel
1-2 Engine stop switch	Equipped on panel
1-3 Alarm buzzer [C.W. Temp., L.O. Pressure]	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel
2-Alarm lamp unit	
Battery not charging	Equipped on panel
C.W. high temperature	Equipped on panel
L.O. low pressure	Equipped on panel
Boost pressure high [for 4LHA-STP]	Equipped on panel
3-Tachometer with hour meter	Equipped on panel
4-Sub meter unit	Equipped on panel
4-1 L.O. pressure meter	Equipped on panel
4-2 C.W. Temperature meter	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel
5-Quartz clock	Not equipped on panel

ACCESSORIES

Standard Package
- Sensor for various panels
- Exhaust/water mixing elbow [L-type]
- Alternator 12V - 80A

Optional
- Flexible mounts
- High-riser/water mixing elbow [instead of L-elbow]
- New C-type instrument panel
- Dual station Y harness
- Dipstick for opposite side
- Air venting device for cooling water tank

NOTE: All data subject to change without notice. Text and illustrations are not binding.

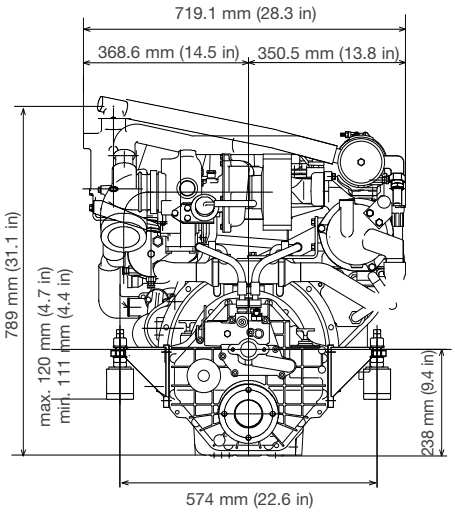
4LHA-STP Series

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 177 kW@3300 rpm	[240 mhp@3300 rpm]	
	** 169 kW@3300 rpm	[230 mhp@3300 rpm]	
Displacement	3.455 ltr	[211 cu in]	
Bore x stroke	100 mm x 110 mm	[3.94 in x 4.33 in]	
Cylinders	4 in line		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electrical starting 12V		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump		
	and rubber impeller seawater pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	365 kg	[805 lbs]	
Environmental	EU: RCD	BSO II	EMC
	SOLAS MED 96/98/EC		
Engine mounting	Rubber type flexible mounting		

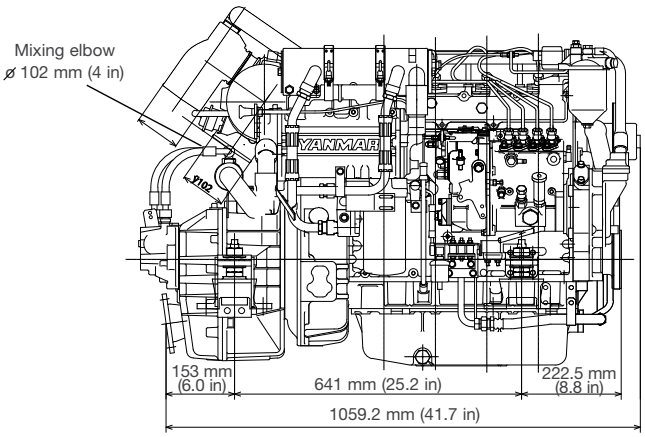
NOTE:
Fuel condition: Density at 15°C = 0.842 g/cm³; 1 mhp = 1 ps = 0.7355 kW = 0.9863 bhp
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



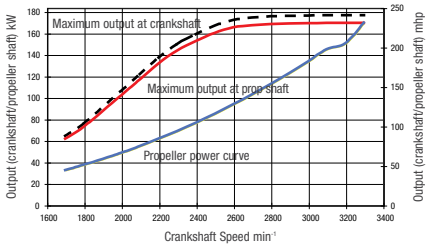
Right side view



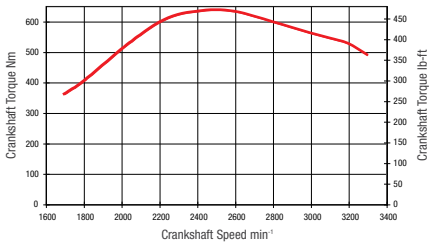
4LHA-STP with ZF63A marine gear

PERFORMANCE CURVES (Output is according ISO 8665 - Output includes +/- 3% tolerance)

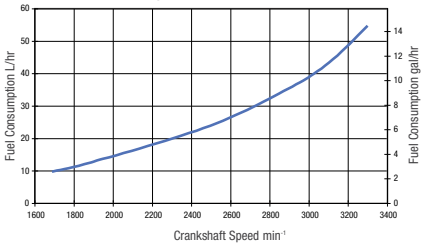
Power



Torque



Fuel Consumption



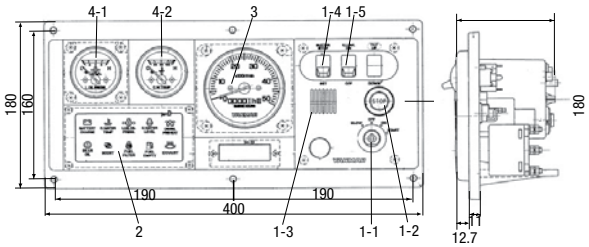
MARINE GEARS*

Model	KMH50A			ZF63A				
Type	8° down hydraulic			8° down hydraulic				
Dry weight	44 kg [97 lbs]			28 kg [62 lbs]				
Reduction ratio [fwd/asn]	1.67/1.67	2.13/2.13	2.43/2.43	1.22/1.22	1.56/1.58	2.04/2.02	2.52/2.54	2.68/2.71
Propeller speed [fwd/asn]	1976/1976	1549/1549	1358/1358	2714/2716	2111/2085	1620/1636	1308/1301	1230/1218
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise				
[propeller shaft - fwd]	viewed from flywheel side			viewed from flywheel side				
Dry weight engine and gear/drive	409 kg [902 lbs]			393 kg [866 lbs]				

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS

New C-type Panel



	TYPE OF INSTRUMENT PANEL
Function	**DIGITAL C-TYPE PANEL**
1-Switch unit	
1-1 Key switch for GLOW/OFF/ON/START [4-position switch]	Equipped on panel
1-2 Engine stop switch	Equipped on panel
1-3 Alarm buzzer [C.W. Temp., L.O. Pressure]	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel
2-Alarm lamp unit	
Battery not charging	Equipped on panel
C.W. high temperature	Equipped on panel
L.O. low pressure	Equipped on panel
Boost pressure high [for 4LHA-STP]	Equipped on panel
3-Tachometer with hour meter	Equipped on panel
4-Sub meter unit	Equipped on panel
4-1 L.O. pressure meter	Equipped on panel
4-2 C.W. Temperature meter	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel
5-Quartz clock	Not equipped on panel

ACCESSORIES

Standard Package
- Sensor for various panels
- Exhaust/water mixing elbow [L-type]
- Alternator 12V - 80A

Optional
- Flexible mounts
- High-riser/water mixing elbow [instead of L-elbow]
- New C-type instrument panel
- Dual station Y harness
- Dipstick for opposite side
- Air venting device for cooling water tank

NOTE: All data subject to change without notice. Text and illustrations are not binding.

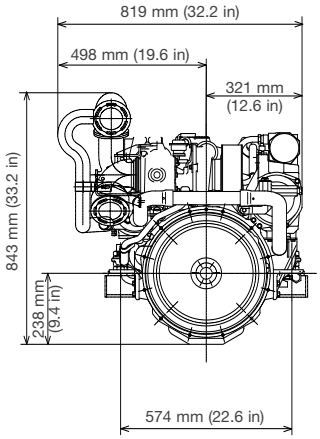
6LYA-STP Series

Configuration	4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	* 272 kW@3300 rpm	[370 mhp@3300 rpm]
	** 264 kW@3300 rpm	[359 mhp@3300 rpm]
Displacement	5.184 ltr	[316 cu in]
Bore x stroke	100 mm x 110 mm	[3.94 in x 4.33 in]
Cylinders	6 in line	
Combustion system	Direct injection	
Aspiration	Turbocharged with watercooled turbine housing	
Starting system	Electric starting 12V - 2.5 kW	
Alternator	12V - 80A	
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from stern	
Dry weight without gear	530 kg	[1168 lbs]
Environmental	EU: RCD	EMC
Engine mounting	Rubber type flexible mounts	

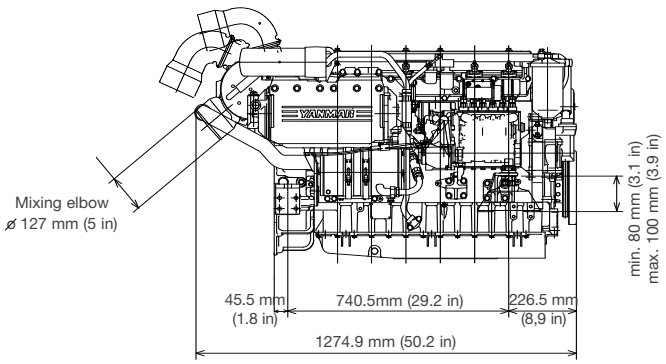
NOTE:
Fuel condition: Density at 15°C = 0.842 g/cm³; 1 mhp = 1 PS = 0.7355 kW = 0.9863 bhp
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



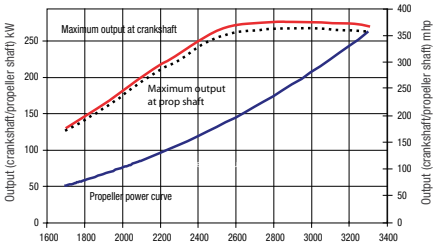
Right side view



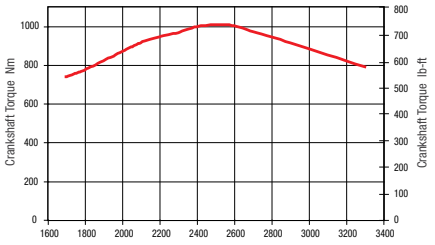
6LYA-STP w/o marine gear

PERFORMANCE CURVES

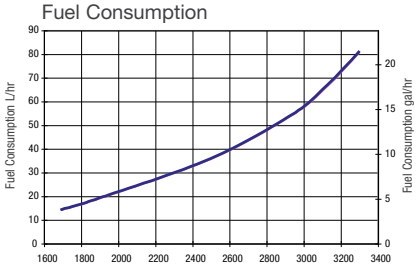
Power


Maximum output at crankshaft
Maximum output at prop shaft
Propeller power curve
Output (crankshaft/propeller shaft) kW
Output (crankshaft/propeller shaft) mhp

Torque



Fuel Consumption



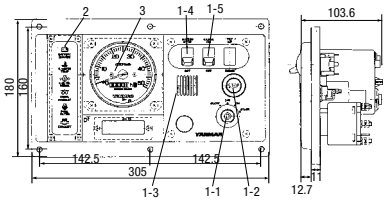
MARINE GEARS / DRIVE

Model	ZF80-1A: 8° Angle			MG5050A: 10° Angle			KMH60A		
Type	Wet and multi-disc clutch			Wet and multi-disc clutch			Hydraulically actuated multi-disc clutch		
Dry Weight	64 kg [141 lbs]			80 kg [176 lbs]			58 kg [128 lbs]		
Reduction Ratio [fwd/asn]	1.20/1.20	1.41/1.41	1.57/1.57	2.00/2.00	2.50/2.50	2.85/2.85	1.55/1.55	2.04/2.04	2.55/2.55
Propeller speed [fwd/asn]	2583/2583	2199/2199	1975/1975	1550/1550	1240/1240	1088/1088	2000/2000	1520/1520	1216/1216
Direction of rotation	Clockwise & Counterclockwise			Clockwise & Counterclockwise			Clockwise & Counterclockwise		
[propeller shaft - fwd]	viewed from stern			viewed from stern			viewed from stern		
Dry weight engine and gear/drive	594 kg [1310 lbs]			610 kg [1345 lbs]			588 kg [1296 lbs]		
Length engine and gear/drive	1556 mm [61 in]			1556 mm [61 in]			1556 mm [61 in]		

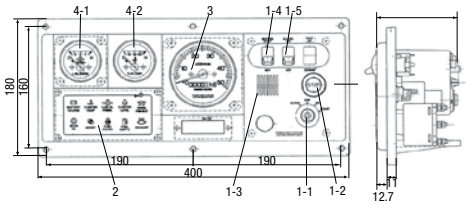
* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

INSTRUMENT PANELS

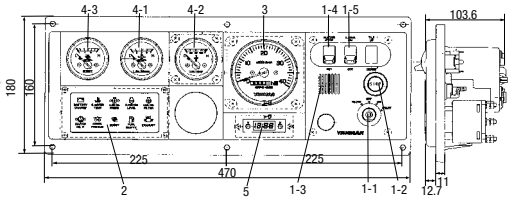
New B-type Panel



New C-type Panel



New D-type Panel



	TYPE OF INSTRUMENT PANEL		
Function	**DIGITAL B-TYPE PANEL**	**NEW C-TYPE PANEL**	**NEW D-TYPE PANEL**
1-Switch unit			
1-1 Key switch [starter switch]	Equipped on panel	Equipped on panel	Equipped on panel
1-2 Engine stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-3 Alarm buzzer [C.W. temp., L.O. pressure]	Equipped on panel	Equipped on panel	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel	Equipped on panel	Equipped on panel
2-Alarm lamp unit			
2-1 Battery not charging	Equipped on panel	Equipped on panel	Equipped on panel
2-2 C.W. high temperature	Equipped on panel	Equipped on panel	Equipped on panel
2-3 L.O. low pressure	Equipped on panel	Equipped on panel	Equipped on panel
2-4 Sea water flow	Equipped on panel	Equipped on panel	Equipped on panel
2-5 C.W. level for fresh water tank	Equipped on panel	Equipped on panel	Equipped on panel
2-6 Boost pressure high	Equipped on panel	Equipped on panel	Equipped on panel
3-Tachometer with hour meter	Equipped on panel	Equipped on panel	Equipped on panel
4-Sub meter unit			
4-1 L.O. pressure meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-2 C.W. temperature meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel	Not equipped on panel	Equipped on panel
5 Quartz clock	Not equipped on panel	Not equipped on panel	Equipped on panel

ACCESORIES

Standard engine package
- Sensor for various panels
- Exhaust/water mixing elbow [L-type]
- Alternator 12V - 80A

Optional accesories:
- Flexible mounts
- Fuel water separator
- High-riser/water mixing elbow [instead of L-elbow]
- Sensor for VDO instrument panels
- Analog and digital [new B-type, new C-type and new D-type] instrument panels
- Control heads
- Lub oil evacuation pump
- Dipstick for opposite side

NOTE: All data subject to change without notice. Text and illustrations are not binding.

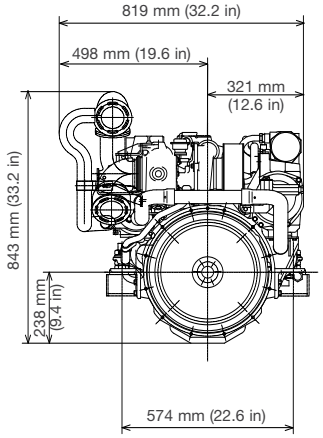
6LY2A-STP Series

Configuration	4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	* 324 kW@3300 rpm	[440 HP@3300 rpm]
	** 225 kW@3300 rpm	[427 HP@3300 rpm]
Displacement	5.813 ltr	[354 cu in]
Bore x stroke	106 mm x 110 mm	[4.17 in x 4.33 in]
Cylinders	6 in line	
Combustion system	Direct injection	
Aspiration	Turbocharged with watercooled turbine housing	
Starting system	Electric starting 12V - 2.5 kW	
Alternator	12V - 80A	
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counter clockwise viewed from stern	
Dry weight without gear	535 kg	[1179 lbs]
Environmental	EU: RCD	EMC
Engine mounting	Rubber type flexible mounting	

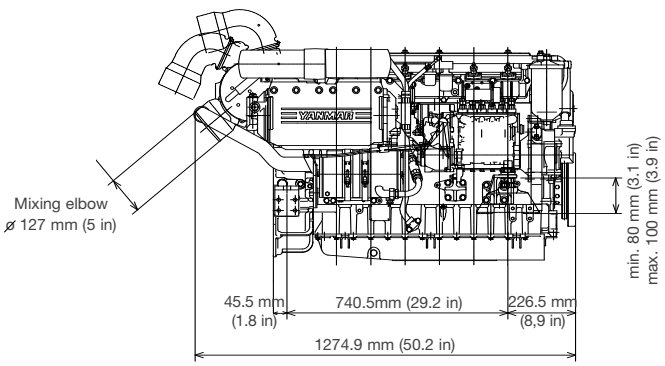
NOTE:
Fuel condition: Density at 15°C = 0.842 g/cm³; 1HP = 0.7355 kW
* Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665]
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view



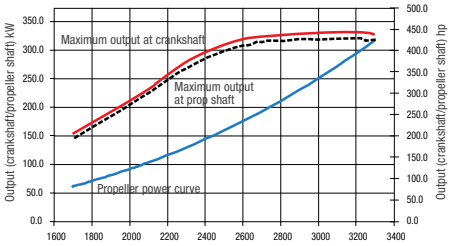
Right side view



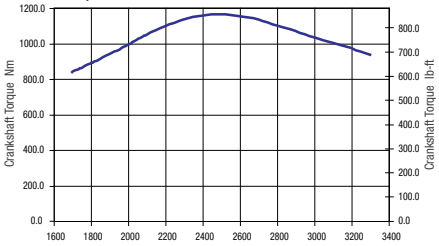
6LY2A-STP with KM2P-1 marine gear

PERFORMANCE CURVES

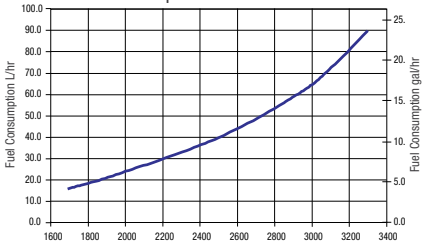
Power


Maximum output at crankshaft
Maximum output at prop shaft
Propeller power curve
Output (crankshaft/propeller shaft) kW
Output (crankshaft/propeller shaft) hp

Torque



Fuel Consumption



MARINE GEARS / DRIVE

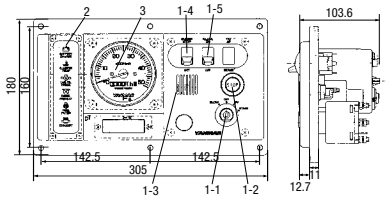
Model	KMH60A		
Type	Hydraulically actuated multi-disc clucth		
Dry weight	58 kg [128 lbs]		
Reduction ratio [fwd/asn]	1.55/1.55	2.04/2.04	2.43/2.43
Propeller speed [fwd/asn]	2000/2000	1520/1520	1276/1276
Direction of rotation	Clockwise & Counterclockwise		
[propeller shaft - fwd]	viewed from stern		
Dry weight engine and gear/drive	588 kg [1296 lbs]		
Length engine and gear/drive	1556 mm [61 in]		

* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

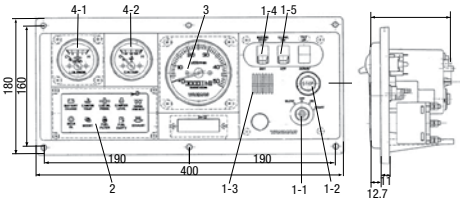
Following gears are available: MG5061A reduction ratio: 1.13, 1.54, 1.75, 2.00, 2.47
MG5061SC (Parallel) reduction ratio: 1.00, 1.15, 1.48 & 1.77
MG5062V (integral V-drive) reduction ratio: 1.19, 1.53, 1.83 & 2.07
ZF80A-1 (down angle) reduction ratio: 1.20, 1.41, 1.57 & 1.96

INSTRUMENT PANELS

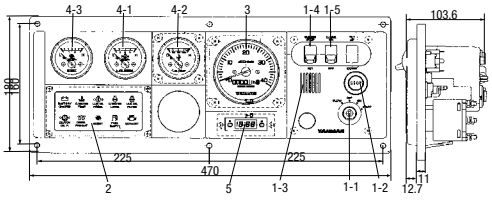
New B-type Panel



New C-type Panel



New D-type Panel



Function	TYPE OF INSTRUMENT PANEL		
	NEW B-TYPE PANEL	NEW C-TYPE PANEL	NEW D-TYPE PANEL
1-Switch unit			
1-1 Key switch [starter switch]	Equipped on panel	Equipped on panel	Equipped on panel
1-2 Engine stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-3 Alarm buzzer [C.W. Temp., L.O. Pressure]	Equipped on panel	Equipped on panel	Equipped on panel
1-4 Alarm buzzer stop switch	Equipped on panel	Equipped on panel	Equipped on panel
1-5 Illumination switch for meters	Equipped on panel	Equipped on panel	Equipped on panel
2-Alarm lamp unit			
2-1 Battery not charging	Equipped on panel	Equipped on panel	Equipped on panel
2-2 C.W. high temperature	Equipped on panel	Equipped on panel	Equipped on panel
2-3 L.O. low pressure	Equipped on panel	Equipped on panel	Equipped on panel
2-4 Sea water flow	Equipped on panel	Equipped on panel	Equipped on panel
2-5 C.W. level for fresh water tank	Equipped on panel	Equipped on panel	Equipped on panel
2-6 Boost pressure high	Equipped on panel	Equipped on panel	Equipped on panel
3-Tachometer with hour meter	Equipped on panel	Equipped on panel	Equipped on panel
4-Sub meter unit			
4-1 L.O. pressure meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-2 C.W. Temperature meter	Not equipped on panel	Equipped on panel	Equipped on panel
4-3 Boost meter [turbo]	Not equipped on panel	Not equipped on panel	Equipped on panel
5-Quartz clock	Not equipped on panel	Not equipped on panel	Equipped on panel

ACCESORIES

Standard engine package
- Sensor for various panels
- Exhaust/water mixing elbow [L-type]
- Alternator 12V - 80A

Optional accesories
- Flexible mounts
- Fuel water separator
- High-riser/water mixing elbow [instead of L-elbow]
- Sensor for VDO instrument panels
- Analog [new B-type, new C-type and new D-type] instrument panels
- Control heads
- Lub oil evacuation pump
- Dipstick for opposite side

NOTE: All data subject to change without notice. Text and illustrations are not binding.

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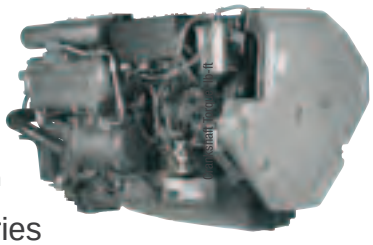


Tier 2 Commercial / Certification

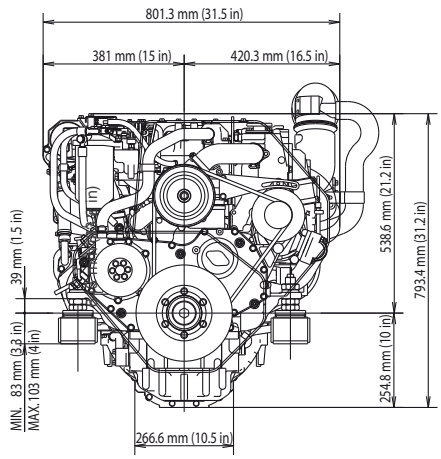
6LY3-UTC Series

Configuration	24 valve, 4-stroke, vertical, water cooled diesel engine
Maximum output at crankshaft	* 273 kW (370 mhp) / 3300 rpm
Continuous rating output at crankshaft	254 kW (345 mhp) / 3198 rpm
Displacement	5.813 L (354 cu in)
Bore x stroke	106 mm x 110 mm (4.17 in x 4.33 in)
Cylinders	6 in line
Combustion system	Direct injection
Aspiration	Turbocharged with seawater cooled intercooler
Starting system	Electrical starting 12V - 3kW
Alternator	12V - 80A
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump
Lubrication system	Enclosed, forced lubricating system
Direction of rotation (crankshaft)	Counter clockwise viewed from flywheel side
Dry weight without gear	640 kg (1411 lbs)
Environmental	EU RCD, US EPA Tier2 (Commercial), EMC, EPA/IMO, IMO Tier2
Engine mounting	Rubber type flexible mounts

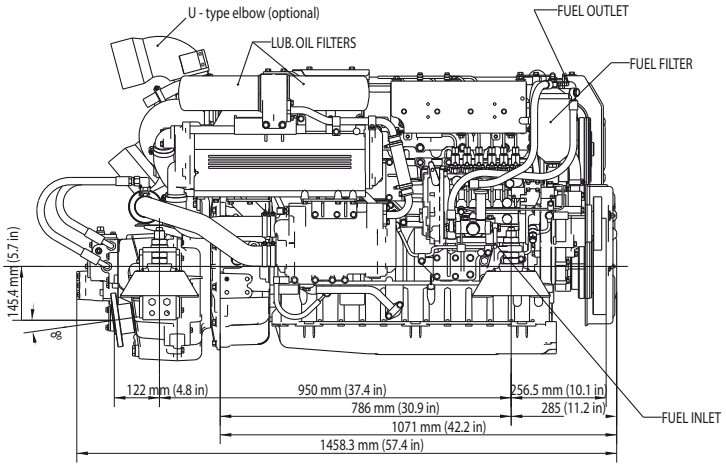
NOTE: Fuel condition: Density at 15°C (59 F) = 0.840 g/cm ³; 1kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C (104 F) at the inlet of the fuel injection pump
Technical data is according to ISO 8665

Dimensions (For detailed line-drawings, please refer to our web-site: www.yanmarmarine.com or contact your supplier)

Front view



Right side view



6LY3-STC with Yanmar KMH61A marine gear

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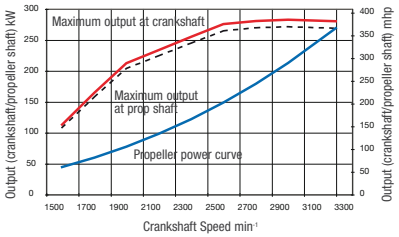
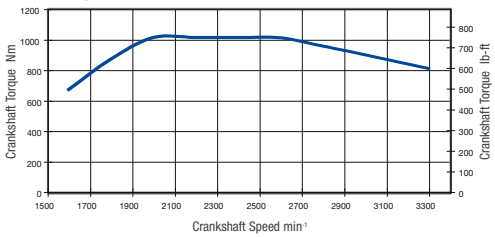
Performance Curves (Output is according ISO 8665)

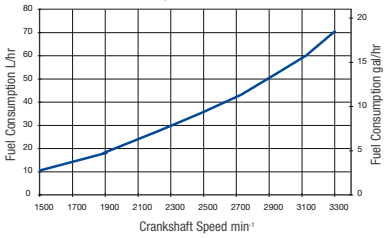
Power



Torque



Fuel Consumption



Marine gear (example) **

Model	KMH61A			ZF85A		
Type	Hydraulically actuated multi-disc clucth			Hydraulically actuated multi-disc clucth		
Dry weight	78 kg (172 lbs)			90 kg (198 lbs)		
Reduction ratio (fwd/asn)	1.55/1.55	2.04/2.04	2.43/2.43	1.57/1.57	1.96/1.96	2.50/2.50
Propeller speed (fwd/asn)	2129/2129	1618/1618	1358/1358	2102/2102	1684/1684	1320/1320
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from flywheel side			Clockwise & counter clockwise viewed from flywheel side		
Dry weight engine with gear	718 kg (1583 lbs)			730 kg (1609 lbs)		
Length engine with gear	1357 mm (53 in)			1373 mm (54 in)		

** Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

Instrument Panels

Various Control heads

Multi function LCD display

CAN Bus system

Multi function LCD display:
- engine information
- maintenance information
- diagnosis messages

Engine ECU Interface

Engine Accessories

Standard Engine Package
- Standard Engine Package
- Air heater
- Belt Cover

Optional Engine Package
- Fuel/Water separator
- High riser mixing elbow, L-Type or U-Type
- Lub oil evacuation pump
- 24 Volt Alternator
- Flexible mounts

Electronic Control System

Standard Electronic Control System (purchased seperatly)
- CANBUS-NMEA 2000 electronic control system
- Ignition panel with rocker switches
- Multi-function LCD display
- Electronic control head

Optional Electronic Control system
- Second station kit for Flybridge
- Ignition panel with Keyswitch
- Extension wire harnesses
- Various control heads
- Trolling mode kit

Texts and illustrations are not binding. Yanmar Marine reserves the right to introduce adaptations without prior notification.

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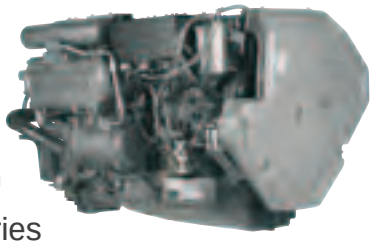


Tier 2 Commercial / Certification

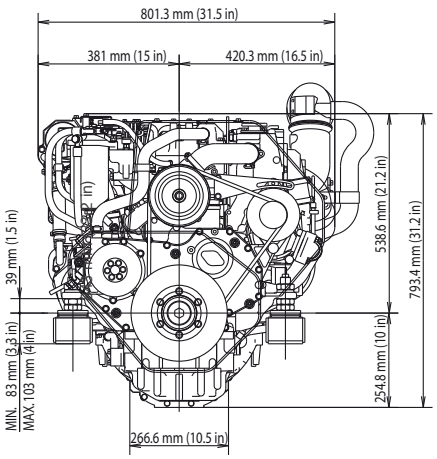
6LY3-STC Series

Configuration	24 valve, 4-stroke, vertical, water cooled diesel engine
Maximum output at crankshaft	* 316 kW (430 mhp) / 3300 rpm
Continuous rating output at crankshaft	295 kW (400 mhp) / 3198 rpm
Displacement	5.813 L (354 cu in)
Bore x stroke	106 mm x 110 mm (4.17 in x 4.33 in)
Cylinders	6 in line, 24 Valve
Combustion system	Direct injection
Aspiration	Turbocharged with seawater cooled intercooler
Starting system	Electrical starting 12V - 3kW
Alternator	12V - 80A
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump
Lubrication system	Enclosed, forced lubricating system
Direction of rotation (crankshaft)	Counter clockwise viewed from flywheel side
Dry weight without gear	640 kg (1411 lbs)
Environmental	EU RCD, US EPA Tier2 (commercial), EMC, EPA/IMO, IMO Tier2
Engine mounting	Rubber type flexible mounts

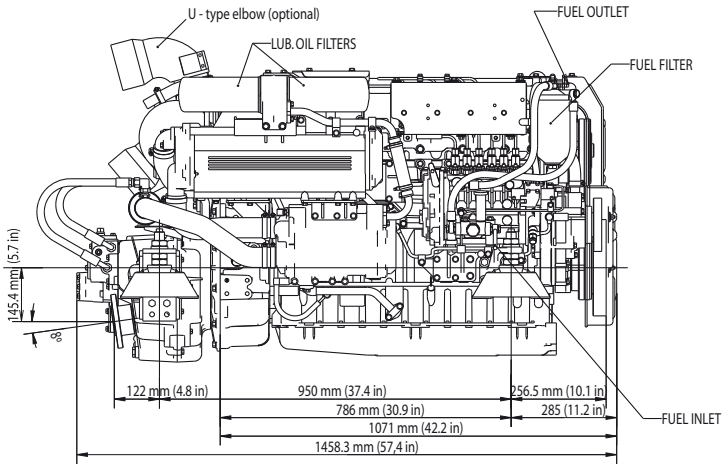
NOTE: Fuel condition: Density at 15°C (59 F) = 0.84 g/cm ^{3}; 1kW = 1.3596 mhp = 1.3410 HP
* Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665)
Technical data is according to ISO 8665

Dimensions (For detailed line-drawings, please refer to our web-site: www.yanmarmarine.com or contact your supplier)

Front view



Right side view



6LY3-STC with Yanmar KMH61A marine gear

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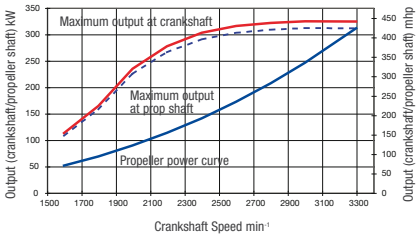
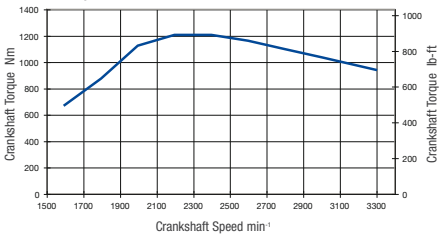
Performance Curves (Output is according ISO 8665)

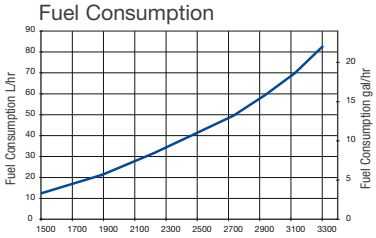
Power



Torque



Fuel Consumption

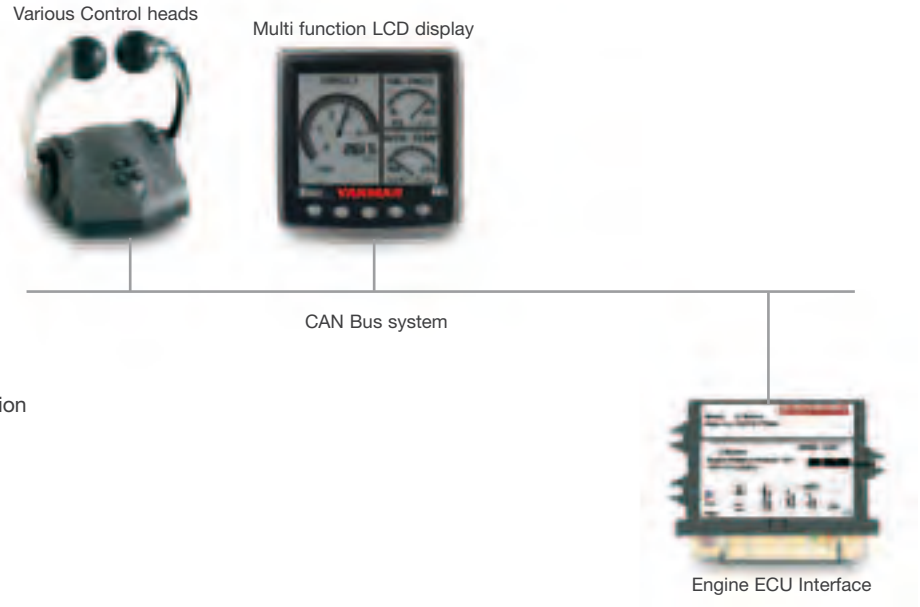


Marine gear (example) **

Model	KMH61A			ZF85A		
Type	Hydraulically actuated multi-disc clucth			Hydraulically actuated multi-disc clucth		
Dry weight	78 kg (172 lbs)			90 kg (198 lbs)		
Reduction ratio (fwd/asn)	1.55/1.55	2.04/2.04	2.43/2.43	1.57/1.57	1.96/1.96	2.50/2.50
Propeller speed (fwd/asn)	2129/2129	1618/1618	1358/1358	2102/2102	1684/1684	1320/1320
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from flywheel side			Clockwise & counter clockwise viewed from flywheel side		
Dry weight engine with gear	718 kg (1583 lbs)			730 kg (1609 lbs)		
Length engine with gear	1357 mm (53 in)			1373 mm (54 in)		

** Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

Instrument Panels



Multi function LCD display:
- engine information
- maintenance information
- diagnosis messages

Engine Accessories

Standard Engine Package
- Standard Engine Package
- Air heater
- Belt Cover

Optional Engine Package
- Fuel/Water separator
- High riser mixing elbow, L-Type or U-Type
- Lub oil evacuation pump
- 24 Volt Alternator
- Flexible mounts

Electronic Control System

Standard Electronic Control System (purchased seperatly)
- CANBUS-NMEA 2000 electronic control system
- Ignition panel with rocker switches
- Multi-function LCD display
- Electronic control head

Optional Electronic Control system
- Second station kit for Flybridge
- Ignition panel with Keyswitch
- Extension wire harnesses
- Various control heads
- Trolling mode kit

Texts and illustrations are not binding. Yanmar Marine reserves the right to introduce adaptations without prior notification.

YANMAR QUALITY INSTRUMENTATION BUILT ON NMEA 2000 OPEN CONTROL

1 Analogue Tachometer

2 Digital and Analogue Speedometer with two frequency inputs

3 Volt

4 A range of third-party devices can be connected via the NMEA 2000 plug and play platform

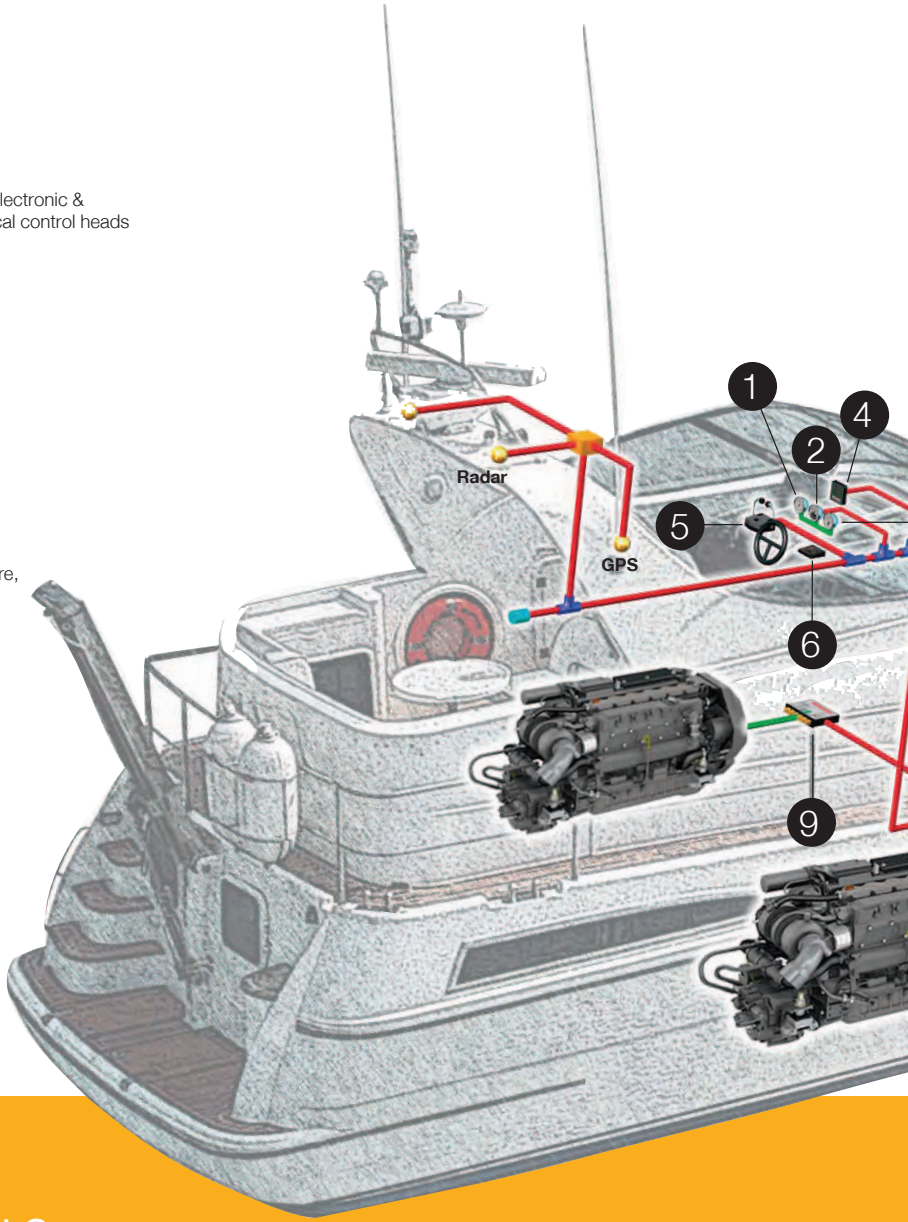
5 Various Electronic & Mechanical control heads

6 Various Start switches

7 Fuel, Temperature, Boost gauges

8 LCD with navigation capability

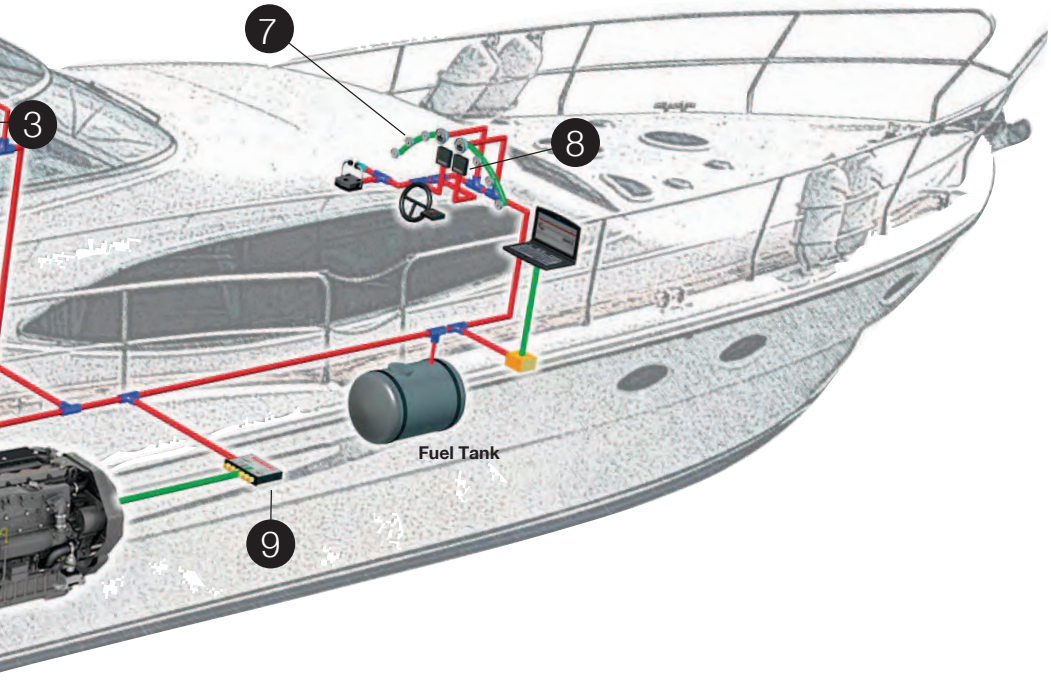
9 CAN-bus Engine Interface, Vessel Data unit and Actuators available



YANMAR BRANDED GAUGES

Yanmar diesel engines are renowned for their performance and reliability. There are displays, instruments, gauges, controls and electronic systems to accompany these engines, all developed to the highest standards, fulfilling demands for functionality and durability. Precision, accuracy, reliability and good looks are key elements in the Yanmar range of equipment to help you enjoy your boating to the full.

- Displays and monitors
- Instruments and gauges
- Engine controls
- Electronic systems



VESSEL CONTROL SYSTEM

Complete control, total comfort.

- Sideway movement
- Diagonal movement
- 360º turn (rotation within a boat length)
- Extra smooth engagement

Yanmar Branded
VCS panels and controls

ORIGINAL PARTS

OIL, COOLANT AND YANMAR GENUINE PARTS

Note that Yanmar Marine offers a range of branded oils, formulated specially for its engines, plus protective coolants. Fitting non-genuine spare parts can turn a reliable Yanmar engine into a malfunctioning engine. Serious problems can occur. Use Yanmar genuine parts to extend the working life of your engine.

YANMAR
Solutioneering Together

Yanmar Marine is dedicated to the needs and preferences of people who enjoy boating, and those who support them, all around the world. With regional headquarters in Europe, the United States, South East Asia and Japan, plus full-scale sales and service supportfacilities in more than 130 countries, Yanmar Marine provides engines, drive systems and accessories for all types of boats, from runabouts to sailboats, from cruisers to luxury power boats. In pleasure boating, the worldwide reputation of Yanmar Marine is second to none.

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